

This safety data sheet was created pursuant to the requirements of:
UK REACH Regulations (SI 2019/758 as amended)

Supersedes date 28-Mar-2019

Revision date 24-Jan-2025

Revision Number 3

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Code(s) 11213
Safety data sheet number 11213
Product Name XIAMETER OFS 6070 SILANE
EC Number 214-685-0
CAS No 1185-55-3
Pure substance/mixture Substance

Contains DIMETHOXYDIMETHYLSILANE

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use

- Manufacture of substance
- Used as monomer at sites other than production sites.
- Intermediate
- Formulation or re-packing.
- Used for formulation of coatings at downstream industrial sites
- Coatings
- Use in laboratories
- Formulation and use of non-metal surface treatment solutions/dispersions and/or mass hydrophobation.
- Sealant
- Electrical and electronic applications
- Textiles
- Industrial use
- Professional use
- Consumer use

For further information, see attached Exposure Scenario

1.3. Details of the supplier of the safety data sheet

Supplier

Univar Solutions UK Ltd
Aquarius House
6 Mid Point Business Park
Bradford
GBR

For further information, please contact

E-mail address SDS.EMEA@univarsolutions.com

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

1.4. Emergency telephone number

Emergency Telephone

SGS - +32 (0)3 575 55 55 (24h)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture**

Flammable liquids	Category 2 - (H225)
Reproductive toxicity	Category 1B - (H360)

2.2. Label elements

Contains DIMETHOXYDIMETHYLSILANE

**Signal word**

Danger

Hazard statements

H360 - May damage fertility or the unborn child

H360F - May damage fertility

H225 - Highly flammable liquid and vapour

Precautionary statements

P201 - Obtain special instructions before use

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

P233 - Keep container tightly closed

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P308 + P313 - IF exposed or concerned: Get medical advice/attention

P370 + P378 - In case of fire: Use dry chemical, CO2, water spray or alcohol-resistant foam to extinguish

Additional information

This product requires tactile warnings if supplied to the general public.

2.3. Other hazards

Product is a static accumulator.

SECTION 3: Composition/information on ingredients**3.1 Substances**

Chemical name	Weight-%	EC No (EU Index No)	UK REACH registration number	Classification according to GB CLP (SI 2020/1567 as amended)	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
TRIMETHOXY (METHYL) SILANE 1185-55-3	>= 95.0 - <= 100.0 %	214-685-0	-	Flam. Liq. 2 (H225)	-	-	-
METHANOL 67-56-1	>= 1.7 - <= 2.3 %	200-659-6 (603-001-00 -X)	-	Flam. Liq. 2 (H225) Acute Tox. 3 (H301) Acute Tox. 3 (H311)	STOT SE 1 :: C>=10% STOT SE 2 ::	-	-

				Acute Tox. 3 (H331) STOT SE 1 (H370)	3%≤C<10%		
DIMETHOXYDIMETHYLSILANE 1112-39-6	≥ 0.9 - ≤ 1.2 %	214-189-4	-	Flam. Liq. 2 (H225) Repr. 1B (H360F)	-	-	-

Full text of H- and EUH-phrases: see section 16

This product does not contain candidate substances of very high concern at a concentration ≥ 0.1% (UK REACH Article 59)

SECTION 4: First aid measures**4.1. Description of first aid measures**

General advice	First aid personnel should wear appropriate protective equipment during any rescue. Use personal protection recommended in Section 8.
Inhalation	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. If breathing is irregular or stopped, administer artificial respiration. Get medical attention if symptoms occur.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if symptoms occur.
Skin contact	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands. Get medical attention if symptoms occur. Wash contaminated clothing before reuse.
Ingestion	Rinse mouth thoroughly with water. Do NOT induce vomiting. If person is fully conscious give 1 cup or 8 ounces (240 ml) of water. If medical advice is delayed and if an adult has swallowed several ounces of chemical, then give 3-4 ounces (1/3-1/2 Cup) (90-120 ml) of hard liquor such as 80 proof whiskey. For children, give proportionally less liquor at a dose of 0.3 ounce (1 1/2 tsp.) (8 ml) liquor for each 10 pounds of body weight, or 2 ml per kg body weight [e.g., 1.2 ounce (2 1/3 tbsp.) for a 40 pound child or 36 ml for an 18 kg child]. Get medical attention immediately if symptoms occur.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms	May damage fertility.
Eyes	May cause slight eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors	In cases where several ounces (60 - 100 ml) have been ingested, consider the use of ethanol and haemodialysis in the treatment. Consult standard literature for details of treatment. If ethanol is used, a therapeutically effective blood concentration in the range of 100 - 150 mg/dl may be achieved by a rapid loading dose followed by a continuous intravenous infusion. Consult standard literature for details of treatment. 4-Methyl pyrazole (Antizol®) is an effective blocker of alcohol dehydrogenase and should be used in the treatment of ethylene glycol (EG), di- or triethylene glycol (DEG, TEG), ethylene glycol butyl ether (EGBE), or methanol intoxication if available. Fomepizole protocol (Brent, J. et al., New England Journal of Medicine, Feb. 8, 2001, 344:6, p. 424-9): loading dose 15 mg/kg intravenously, follow by bolus dose of 10 mg/kg every 12 hours: after 48 hours, increase bolus dose to 15 mg/kg every 12 hours. Continue fomepizole until serum methanol, EG, DEG, TEG or EGBE are undetectable. The signs and symptoms of poisoning include anion gap metabolic acidosis, CNS depression, renal tubular injury, and possible late-stage cranial nerve involvement. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48
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hours for signs of respiratory distress. In severe poisoning, respiratory support with mechanical ventilation and positive end expiratory pressure may be required. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Maintain adequate ventilation and oxygenation of the patient. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Alcohol resistant foam. Dry sand.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	When heated and in case of fire, toxic vapours/gases may be formed. Flash back possible over considerable distance. Exposure to combustion products may be a hazard to health. Flammable concentrations of vapour can accumulate at temperatures above flash point; see Section 9. Flammable mixtures may exist within the vapour space of containers at room temperature. Closed containers can burst violently when heated, due to excess pressure build-up. Vapours may form explosive mixtures with air.
Hazardous combustion products	Carbon oxides. Silicon oxides. Methanol. Formaldehyde.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid contact with skin, eyes and inhalation of vapours. Remove all sources of ignition. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Ground and bond container and receiving equipment. Vapours may form explosive mixtures with air. Do not allow run-off from fire-fighting to enter drains or water courses. Follow precautions for safe handling described in this safety data sheet.
Other information	Ventilate the area.
For emergency responders	Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions	Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.
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6.3. Methods and material for containment and cleaning up

Methods for containment	Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapour suppressing foam may be used to reduce vapours. Dyke far ahead of spill to collect run-off water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.
Methods for cleaning up	Use non-sparking tools. Suppress (knock down) gases/vapours/mists with a water spray jet. Absorb with earth, sand or other non-combustible material and transfer to containers for

later disposal. Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid contact with skin, eyes and inhalation of vapours. Do not swallow. Keep container closed when not in use. Keep away from heat, sparks and open flame. Take precautionary measures against static discharge. Avoid spilling. Avoid release to the environment. Use non-sparking tools. Handle in accordance with good industrial hygiene and safety practice. Empty containers retain product residue and can be hazardous. Use explosion-proof electrical, ventilating and lighting equipment. Ensure all equipment is electrically grounded before beginning transfer operations. This material can accumulate static charge due to its inherent physical properties and can therefore cause an electrical ignition source to vapors. In order to prevent a fire hazard, as bonding and grounding may be insufficient to remove static electricity, it is necessary to provide an inert gas purge before beginning transfer operations. Restrict flow velocity in order to reduce the accumulation of static electricity. Ground and bond container and receiving equipment.

General hygiene considerations Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Keep in properly labelled containers. Store locked up. Keep away from open flames, hot surfaces and sources of ignition. Store away from the following materials. Strong oxidising agents. Organic peroxide. Flammable solid. Pyrophoric liquids. Pyrophoric solids. Self-heating substances and mixtures. Substances and mixtures, which in contact with water, emit flammable gases. Explosives. Gases.

7.3. Specific end use(s)

Specific use(s)

See section 1 for more information.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	United Kingdom
METHANOL 67-56-1	TWA: 200 ppm TWA: 266 mg/m ³ STEL: 250 ppm STEL: 333 mg/m ³ Sk*

Biological occupational exposure limits This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
TRIMETHOXY (METHYL) SILANE 1185-55-3		3.6 mg/m ³ [4] [6]	25.6 mg/m ³ [4] [6]
METHANOL 67-56-1		20 mg/kg bw/day [4] [6] 20 mg/kg bw/day [4] [7]	130 mg/m ³ [4] [6] 130 mg/m ³ [4] [7] 130 mg/m ³ [5] [6] 130 mg/m ³ [5] [7]
DIMETHOXYDIMETHYLSILANE 1112-39-6		20 mg/kg bw/day [4] [7] 2.8 mg/kg bw/day [4] [6]	19.7 mg/m ³ [4] [6] 130 mg/m ³ [4] [7] 130 mg/m ³ [5] [6] 130 mg/m ³ [5] [7]

[4] Systemic health effects.
 [5] Local health effects.
 [6] Long term.
 [7] Short term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
TRIMETHOXY (METHYL) SILANE 1185-55-3	0.26 mg/m ³ [4] [6]	7.2 mg/m ³ [4] [6]	6.25 mg/m ³ [4] [6]
METHANOL 67-56-1	4 mg/kg bw/day [4] [6] 4 mg/kg bw/day [4] [7]	4 mg/kg bw/day [4] [6] 4 mg/kg bw/day [4] [7]	26 mg/m ³ [4] [6] 26 mg/m ³ [4] [7] 26 mg/m ³ [5] [6] 26 mg/m ³ [5] [7]
DIMETHOXYDIMETHYLSILANE 1112-39-6	4 mg/kg bw/day [4] [7] 1 mg/kg bw/day [4] [6]	4 mg/kg bw/day [4] [7] 1 mg/kg bw/day [4] [6]	3.5 mg/m ³ [4] [6] 26 mg/m ³ [4] [7] 26 mg/m ³ [5] [6] 26 mg/m ³ [5] [7]

[4] Systemic health effects.
 [5] Local health effects.
 [6] Long term.
 [7] Short term.

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
METHANOL 67-56-1	20.8 mg/L	1540 mg/L	2.08 mg/L		
DIMETHOXYDIMETHYLSILANE 1112-39-6	0.252 mg/L	1.17 mg/L	0.0252 mg/L	0.117 mg/L	

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
TRIMETHOXY (METHYL) SILANE 1185-55-3	0.73 mg/kg	0.073 mg/kg		0.03 mg/kg	
METHANOL 67-56-1	77 mg/kg sediment dw	7.7 mg/kg sediment dw	100 mg/L	100 mg/kg soil dw	
DIMETHOXYDIMETHYLSILANE 1112-39-6	0.9119 mg/kg sediment dw	0.0912 mg/kg sediment dw	10 mg/L	0.0345 mg/kg soil dw	

8.2. Exposure controls

Engineering controls No information available.

Personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Use eye protection according to EN 166.

Hand protection Wear suitable gloves. Gloves must conform to standard EN 374.

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
	Wear protective butyl rubber gloves	> 0.35 mm	> 120 minutes
	Rubber (natural, latex)	> 0.35 mm	> 120 minutes
	Wear protective Neoprene™ gloves	> 0.35 mm	> 120 minutes
	Nitrile/butadiene rubber ("nitrile" or "NBR").	> 0.35 mm	> 120 minutes
	Ethyl vinyl alcohol laminate ("EVAL")	> 0.35 mm	> 120 minutes
	Polyvinyl chloride (PVC)	> 0.35 mm	> 120 minutes

Skin and body protection Wear appropriate clothing to prevent reasonably probable skin contact. Antistatic footwear.

Respiratory protection Use appropriate respiratory protection.
Wear self-contained breathing apparatus.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state Liquid
Appearance Liquid
Colour Colourless
Odour Strong.
Odour threshold No information available

Property	Values	Remarks • Method
Melting point / freezing point		Not determined.
Initial boiling point and boiling range	100 °C	@ 760 mmHg.
Flammability		No information available.
Flammability Limit in Air		No information available.
Upper flammability or explosive limits		
Lower flammability or explosive limits		
Flash point	8.0 °C	Tag Closed Cup.
Autoignition temperature		No information available.
Decomposition temperature		No information available.
pH		No information available.
pH (as aqueous solution)		No information available.
Kinematic viscosity	1 cSt	@ 25 °C.
Dynamic viscosity		No information available.
Water solubility		Not determined.
Solubility(ies)		No information available.
Partition coefficient		Not determined.
Vapour pressure		No information available.
Relative density	0.948	
Bulk density		No information available
Liquid Density	No information available	No information available

Relative vapour density	No information available.
Particle characteristics	Not applicable. liquid.
Particle Size	No information available
Particle Size Distribution	No information available
Explosive properties	Not considered to be explosive.
Oxidising properties	Does not meet the criteria for classification as oxidising

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No known effects under normal use conditions.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Yes.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions The following materials may react with the product.. Strong oxidising agents. When heated, vapours/gases hazardous to health may be formed. Temperatures above 150 °C / 300 °F. Formaldehyde. Vapours may form explosive mixtures with air. Highly flammable liquid and vapour.

10.4. Conditions to avoid

Conditions to avoid Heat, flames and sparks. Avoid static discharge.

10.5. Incompatible materials

Incompatible materials Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Carbon oxides. Silicon oxides. Methanol. Formaldehyde.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

Inhalation	Inhalation of vapours in high concentration may cause irritation of respiratory system.
Eye contact	May cause slight eye irritation. Corneal injury is unlikely.
Skin contact	Brief contact may cause slight skin irritation with local redness.
Ingestion	May cause discomfort if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms May damage fertility.

Acute toxicity

Numerical measures of toxicity**Dermal LD50** Dermal LD50 > 2000 mg/kg**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
TRIMETHOXY (METHYL) SILANE	= 11685 mg/kg (Rat)	> 9500 mg/kg (Rabbit)	> 7605 ppm (Rat) 6 h
METHANOL	340 mg/kg	15800 mg/kg	3 mg/L
DIMETHOXYDIMETHYLSILANE	> 2000 - 5000 mg/kg (Rat)	-	> 4.7 mg/l (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Skin corrosion/irritation**

Brief contact may cause slight skin irritation with local redness.

TRIMETHOXY (METHYL) SILANE (1185-55-3)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Brief contact may cause slight skin irritation with local redness.

METHANOL (67-56-1)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Rabbit	Dermal			Mild skin irritant

DIMETHOXYDIMETHYLSILANE (1112-39-6)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Brief contact is essentially non-irritating to skin.

Serious eye damage/eye irritation

May cause slight eye irritation. Corneal injury is unlikely.

TRIMETHOXY (METHYL) SILANE (1185-55-3)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					May cause slight eye irritation Corneal injury is unlikely

METHANOL (67-56-1)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Rabbit				Moderate eye irritation

DIMETHOXYDIMETHYLSILANE (1112-39-6)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					non-irritant

Respiratory or skin sensitisation

Not a skin sensitiser.

Method	Species	Exposure route	Results
	Mouse	Dermal	Not a skin sensitiser

TRIMETHOXY (METHYL) SILANE (1185-55-3)

Method	Species	Exposure route	Results
	Mouse	Dermal	Not a skin sensitiser

METHANOL (67-56-1)

Method	Species	Exposure route	Results
	Guinea pig	Dermal	No sensitisation responses

			were observed
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DIMETHOXYDIMETHYLSILANE (1112-39-6)

Method	Species	Exposure route	Results
	Guinea pig	Dermal	Not a skin sensitiser

Germ cell mutagenicity No information available.

Component Information

TRIMETHOXY (METHYL) SILANE (1185-55-3)

Method	Species	Results
	in vitro	In vitro genetic toxicity studies were negative in some cases and positive in other cases.
		Did not show mutagenic effects in animal experiments

METHANOL (67-56-1)

Method	Species	Results
	in vitro	In vitro genetic toxicity studies were negative in some cases and positive in other cases.
	in vivo	Animal genetic toxicity studies were negative in some cases and positive in other cases

DIMETHOXYDIMETHYLSILANE (1112-39-6)

Method	Species	Results
	in vitro	Negative

Carcinogenicity No information available.

Component Information

METHANOL (67-56-1)

Method	Species	Results
		Did not cause cancer in laboratory animals.

Reproductive toxicity May damage fertility.

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as reproductive toxins.

Chemical name	United Kingdom
METHANOL	Repr. 2

TRIMETHOXY (METHYL) SILANE (1185-55-3)

Method	Species	Results
		This product does not contain any known or suspected reproductive hazards

METHANOL (67-56-1)

Method	Species	Results
	Rat	Negative
	Mouse	Reproductive toxicant

DIMETHOXYDIMETHYLSILANE (1112-39-6)

Method	Species	Results
		May damage fertility

STOT - single exposure No information available.

TRIMETHOXY (METHYL) SILANE (1185-55-3)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Evaluation of available data suggests that this material is not an STOT-SE toxicant

METHANOL (67-56-1)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					May cause damage to organs Eyes Central nervous system

DIMETHOXYDIMETHYLSILANE (1112-39-6)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Evaluation of available data suggests that this material is not an STOT-SE toxicant

STOT - repeated exposure Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Component Information

TRIMETHOXY (METHYL) SILANE (1185-55-3)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Based on available data, repeated exposures are not anticipated to cause significant adverse effects

METHANOL (67-56-1)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Rat	Inhalation	NOAEL 6.55 mg/L	4 weeks	Not classified
	Rat	Inhalation	NOAEL 13.1 mg/L	6 weeks	Not classified
	Rat	Oral	NOAEL 2,500 mg/kg bw/d	90 days	Not classified

DIMETHOXYDIMETHYLSILANE (1112-39-6)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					In animals, effects have been reported on the following organs: Liver Male reproductive organs. This material contains dimethyldimethoxysilane. Repeated exposure in rats to dimethyldimethoxysilane resulted in protoporphyrin

					accumulation in the liver. Without knowledge of the specific mechanism leading to the protoporphyrin accumulation the relevance of this finding to humans is unknown.
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Aspiration hazard

Material is not classified as an aspiration hazard based on insufficient data, however materials with low viscosity may be aspirated into the lungs during ingestion or vomiting.

Other adverse effects

No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity

The environmental impact of this product has not been fully investigated.

TRIMETHOXY (METHYL) SILANE (1185-55-3)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
OECD Test No. 203: Fish, Acute Toxicity Test	Oncorhynchus mykiss (rainbow trout)	LC50	> 110 mg/L	96 hours	
OECD Test No. 202: Daphnia sp., Acute Immobilisation Test	Daphnia magna	EC50	> 122 mg/L	48 hours	
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test	Pseudokirchneriella subcapitata	ErC50	> 3.6 mg/L	72 hours	
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test	Pseudokirchneriella subcapitata	NOEC	>= 3.6 mg/L	72 hours	
OECD Test No. 209: Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation)	activated sludge	EC10	> 100 mg/L	3 hours	
Chronic aquatic toxicity	Daphnia magna	NOEC	>= 10 mg/L	21 days	

METHANOL (67-56-1)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
	activated sludge	IC50	>1000 mg/L	3 hours	
	Algae	EC50	16.9 mg/L	96 hours	
	Fish	LC50	15400 mg/L	96 hours	Not classified
	Green Algae	EC50	22000 mg/L	96 hours	
	Water flea	EC50	20803 mg/L	24 hours	
	Algae	NOEC	9.96 mg/L	96 hours	
	Water flea	NOEC	122 mg/L	21 days	Not classified

DIMETHOXYDIMETHYLSILANE (1112-39-6)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
OECD Test No. 203: Fish, Acute Toxicity Test	Oncorhynchus mykiss (rainbow trout)	LC50	> 126 mg/L	96 hours	
OECD Test No. 202: Daphnia sp., Acute	Daphnia magna	EC50	> 119 mg/L	48 hours	

Immobilisation Test					
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test	Pseudokirchneriella subcapitata	EC50	> 118 mg/L	72 hours	
OECD Test No. 209: Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation)		EC50	> 100 mg/L	3 hours	

12.2. Persistence and degradability

Persistence and degradability Not readily biodegradable.

TRIMETHOXY (METHYL) SILANE (1185-55-3)

Method	Exposure time	Value	Results
	28 days	Biodegradation 54%	Not readily biodegradable

METHANOL (67-56-1)

Method	Exposure time	Value	Results
OECD Test No. 301C: Ready Biodegradability: Modified MITI Test (I) (TG 301 C)	14 days	Biodegradation 92 %	Readily biodegradable

DIMETHOXYDIMETHYLSILANE (1112-39-6)

Method	Exposure time	Value	Results
	28 days	Biodegradation 0 %	Not readily biodegradable

12.3. Bioaccumulative potential

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient
TRIMETHOXY (METHYL) SILANE	-0.82
METHANOL	-0.77
DIMETHOXYDIMETHYLSILANE	2

12.4. Mobility in soil

Mobility in soil Not determined.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
TRIMETHOXY (METHYL) SILANE	The substance is not PBT / vPvB
METHANOL	The substance is not PBT / vPvB
DIMETHOXYDIMETHYLSILANE	The substance is not PBT / vPvB

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Waste from residues/unused Should not be released into the environment. Dispose of in accordance with local

products	regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number	UN1993
14.2 UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (METHANOL, DIMETHOXYDIMETHYLSILANE)
14.3 Transport hazard class(es)	3
14.4 Packing group	II
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	A3
ERG Code	3H

IMDG

14.1 UN number or ID number	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (METHANOL, DIMETHOXYDIMETHYLSILANE)
14.3 Transport hazard class(es)	3
14.4 Packing group	II
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	274
EmS-No	F-E, S-E
14.7 Maritime transport in bulk according to IMO instruments	No information available

RID

14.1 UN number or ID number	UN1993
14.2 UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (METHANOL, DIMETHOXYDIMETHYLSILANE)
14.3 Transport hazard class(es)	3
14.4 Packing group	II
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	274, 601, 640D
Classification code	F1

ADR

14.1 UN number or ID number	UN1993
14.2 UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (METHANOL, DIMETHOXYDIMETHYLSILANE)
14.3 Transport hazard class(es)	3
14.4 Packing group	II
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	274, 601, 640C
Classification code	F1
Tunnel restriction code	(D/E)

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

Authorisations and/or restrictions on use:

This product contains one or more substances subject to restriction (UK REACH - Annex XVII).

This product does not contain substances subject to authorisation (UK REACH - Annex XIV).

Product restricted per REACH Annex XVII: 3, 40, 69

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
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METHANOL - 67-56-1	69, 75.	-
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Persistent Organic Pollutants

Not applicable

Export Notification requirements

Not applicable

Named dangerous substances per COMAH Regulations 2015 (as amended)

Chemical name	Lower-tier requirements (tons)	Upper-tier requirements (tons)
METHANOL - 67-56-1	500	5000

The Ozone-Depleting Substances Regulations 2015

Not applicable

The Biocidal Products Regulations 2001 (as amended)

Not applicable

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)

Not applicable

Poisons Act 1972 (Explosive Precursors) Regulations (as Amended)

Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECI	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status
NZIoC	Contact supplier for inventory compliance status

Legend:

- TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC - Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals

15.2. Chemical safety assessment**Chemical Safety Report**

A Chemical Safety Assessment has been carried out for this substance

SECTION 16: Other information**Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under section 3**

- H225 - Highly flammable liquid and vapour
H301 - Toxic if swallowed
H311 - Toxic in contact with skin
H331 - Toxic if inhaled
H360F - May damage fertility

H370 - Causes damage to organs

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	Sensitisers		

Revision Note [SDS sections updated 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16](#)

Classification procedure

Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	On basis of test data
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
 European Chemicals Agency (ECHA) (ECHA_API)
 Environmental Protection Agency
 Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 National Institute of Technology and Evaluation (NITE)
 Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 U.S. National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
 Organisation for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

Prepared By Lisa Bland

Supersedes date 28-Mar-2019

Revision date 24-Jan-2025

This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended)
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name XIAMETER OFS-6070 Silane
Chemical name Methyltrimethoxysilane
Pure substance/mixture Substance
REACH registration number 01-2119517436-40-XXXX
CAS No 1185-55-3
EC No (EU Index No) 214-685-0
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Manufacture of substance
Type Worker
Main user group Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies) ERC1 - Manufacture of substances ERC2 - Formulation of preparations (mixtures) ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates) ERC6c - Industrial use of monomers for manufacture of thermoplastics

Process category(ies) PROC1 - Use in closed process, no likelihood of exposure
 PROC2 - Use in closed, continuous process with occasional controlled exposure
 PROC3 - Use in closed batch process (synthesis or formulation)
 PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
 PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Product category(ies) PC19 - Intermediate
Product Name XIAMETER OFS-6070 Silane
Sector(s) of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites SU8 - Manufacture of bulk, large scale chemicals (including petroleum products) SU9 - Manufacture of fine chemicals

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC1 - Manufacture of substances
 - ERC2 - Formulation of preparations (mixtures)
 - ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)
 - ERC6c - Industrial use of monomers for manufacture of thermoplastics

Covers concentrations up to 100%

Amounts used

Type	Annual amount per site
Value	10000
Units	t(ons)/year
Remarks	Continuous release

Other operational conditions of use affecting environmental exposure

Emission days	350
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Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	3100 m3/d
Sludge treatment	Can be landfilled or incinerated, when in compliance with local regulations
Remarks	Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination

Type	Onsite STP
Assumed domestic sewage treatment plant flow	3100 m3/d
Sludge treatment	Can be landfilled or incinerated, when in compliance with local regulations
Remarks	Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination

Environmental factors not influenced by risk management

Receiving water dilution (fresh or marine)	3100000 m3/d
Local freshwater dilution factor	900
Local marine water dilution factor	1000

Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	Upgrade of the system in place or additional air treatment measures, such as wet scrubber and/or air filtration and/or thermal oxidation and/or vapour recovery systems, in order to achieve a reduction of the air emissions Prevent environmental discharge consistent with regulatory requirements No discharge of substance into waste water
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Control measures to prevent releases

Air	Typical measures to maintain workplace concentrations of airborne VOCs and particulates below respective OELs: e.g. thermal wet scrubber - gas removal and/or air filtration - particle removal and/or thermal oxidation and/or vapour recovery - adsorption
Water	Acclimated biological treatment

Conditions and measures related to external treatment of waste for disposal

Disposal	Dispose of waste product or used containers according to local regulations
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Control of worker exposure

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	30000 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Use of closed transfers of liquids from storage to production equipment (e.g. metered piped or pumped additions) Avoid accumulating electrostatic charge Use dry break couplings for material transfer Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Use engineering controls to keep exposures below the OEL or DNEL Ensure procedures and training for emergency decontamination and disposal are in place Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a full face respirator conforming to EN 136 with Type A filter or better Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection

	Chemical resistant apron Prolonged or repeated exposure increases the risk Wear positive pressure self-contained breathing apparatus (SCBA) Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Permit to work for maintenance work Clean equipment and the work area every day Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	30000 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Use of closed transfers of liquids from storage to production equipment (e.g. metered piped or pumped additions) Avoid accumulating electrostatic charge Use dry break couplings for material transfer Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Use engineering controls to keep exposures below the OEL or DNEL Ensure procedures and training for emergency decontamination and disposal are in place Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a full face respirator conforming to EN 136 with Type A filter or better Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear positive pressure self-contained breathing apparatus (SCBA) Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Permit to work for maintenance work Clean equipment and the work area every day Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	30000 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Use of closed transfers of liquids from storage to production equipment (e.g. metered piped or pumped additions) Avoid accumulating electrostatic charge

	Use dry break couplings for material transfer Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Use engineering controls to keep exposures below the OEL or DNEL Ensure procedures and training for emergency decontamination and disposal are in place Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a full face respirator conforming to EN 136 with Type A filter or better Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear positive pressure self-contained breathing apparatus (SCBA) Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Permit to work for maintenance work Clean equipment and the work area every day Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	30000 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Use of closed transfers of liquids from storage to production equipment (e.g. metered piped or pumped additions) Avoid accumulating electrostatic charge Use dry break couplings for material transfer Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Use engineering controls to keep exposures below the OEL or DNEL Ensure procedures and training for emergency decontamination and disposal are in place Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a full face respirator conforming to EN 136 with Type A filter or better Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear positive pressure self-contained breathing apparatus (SCBA) Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Permit to work for maintenance work Clean equipment and the work area every day Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)
Covers concentrations up to	100%

Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	30000 kg/d
Exposure duration	Avoid carrying out operation for more than 1 hour
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Use of closed transfers of liquids from storage to production equipment (e.g. metered piped or pumped additions) Avoid accumulating electrostatic charge Use dry break couplings for material transfer Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Use engineering controls to keep exposures below the OEL or DNEL Ensure procedures and training for emergency decontamination and disposal are in place Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a full face respirator conforming to EN 136 with Type A filter or better Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear positive pressure self-contained breathing apparatus (SCBA) Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Permit to work for maintenance work Clean equipment and the work area every day Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	30000 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 5 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Use of closed transfers of liquids from storage to production equipment (e.g. metered piped or pumped additions) Avoid accumulating electrostatic charge Use dry break couplings for material transfer Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Use engineering controls to keep exposures below the OEL or DNEL Ensure procedures and training for emergency decontamination and disposal are in place Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a full face respirator conforming to EN 136 with Type A filter or better Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear positive pressure self-contained breathing apparatus (SCBA) Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and	Supervision in place to check that the RMMs in place are being used correctly and OCs followed

exposure	Permit to work for maintenance work Clean equipment and the work area every day Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C
Process category(ies)	PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	30000 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 5 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Use of closed transfers of liquids from storage to production equipment (e.g. metered piped or pumped additions) Avoid accumulating electrostatic charge Use dry break couplings for material transfer Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Use engineering controls to keep exposures below the OEL or DNEL Ensure procedures and training for emergency decontamination and disposal are in place Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a full face respirator conforming to EN 136 with Type A filter or better Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear positive pressure self-contained breathing apparatus (SCBA) Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Permit to work for maintenance work Clean equipment and the work area every day Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Section 3 - Exposure estimation

Environmental release category(ies) - ERC1 - Manufacture of substances

- ERC2 - Formulation of preparations (mixtures)

- ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)

- ERC6c - Industrial use of monomers for manufacture of thermoplastics

Predicted No Effect Concentration (PNEC)

Freshwater sediment	0.73 mg/kg w.w.
Marine sediment	0.073 mg/kg w.w.
Soil	0.03 mg/kg w.w.

Calculation method Used EUSES model

Remarks Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0.0082 mg/l	< 0.006
Marine water	0.0028 mg/l	< 0.021
Freshwater sediment	0.0065 mg/kg w.w.	< 0.006
Marine sediment	0.0022 mg/kg w.w.	< 0.021
Soil	0.018 mg/kg w.w.	< 0.011

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	3.6 mg/kg bw/d
Worker - inhalative, long-term - systemic	25.6 mg/m ³
Consumer - oral, long-term - systemic	0.26 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.2 mg/kg bw/d
Consumer - inhalative, long-term - systemic	6.25 mg/m ³

Calculation method

ECETOC TRA v2.0 Worker; modified version

Remarks Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Process category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio (RCR)
PROC1 - Use in closed process, no likelihood of exposure	Worker - dermal, long-term - systemic	0.002 mg/kg bw/d	0.005
PROC1 - Use in closed process, no likelihood of exposure	Worker - inhalative, long-term - systemic	0.04 mg/m ³	0.002
PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - dermal, long-term - systemic	0.007 mg/kg bw/d	0.018
PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - inhalative, long-term - systemic	2 mg/m ³	0.078
PROC3 - Use in closed batch process (synthesis or formulation)	Worker - dermal, long-term - systemic	0.003 mg/kg bw/d	0.009
PROC3 - Use in closed batch process (synthesis or formulation)	Worker - inhalative, long-term - systemic	4 mg/m ³	0.16
PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises	Worker - dermal, long-term - systemic	0.034 mg/kg bw/d	0.09
PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises	Worker - inhalative, long-term - systemic	7.9 mg/m ³	0.31
PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)	Worker - dermal, long-term - systemic	0.014 mg/kg bw/d	0.036
PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)	Worker - inhalative, long-term - systemic	4 mg/m ³	0.16
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - dermal, long-term - systemic	0.034 mg/kg bw/d	0.09
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - inhalative, long-term - systemic	5 mg/m ³	0.19

PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	Worker - dermal, long-term - systemic	0.021 mg/kg bw/d	0.054
PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	Worker - inhalative, long-term - systemic	12 mg/m ³	0.47

Remarks Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Section 4 - Guidance to check compliance with the exposure scenario

ECHA guidance for downstream users. Further information on the assumptions contained in this exposure scenario can be found at. http://guidance.echa.europa.eu/guidance_en.htm.

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name XIAMETER OFS-6070 Silane
Chemical name Methyltrimethoxysilane
Pure substance/mixture Substance
REACH registration number 01-2119517436-40-XXXX
CAS No 1185-55-3
EC No (EU Index No) 214-685-0
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Used as monomer at sites other than production sites.
Type Worker
Main user group Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies) ERC6c - Industrial use of monomers for manufacture of thermoplastics
Process category(ies) PROC1 - Use in closed process, no likelihood of exposure
 PROC2 - Use in closed, continuous process with occasional controlled exposure
 PROC3 - Use in closed batch process (synthesis or formulation)
 PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Product category(ies) PC19 - Intermediate
Product Name XIAMETER OFS-6070 Silane
Sector(s) of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites SU8 - Manufacture of bulk, large scale chemicals (including petroleum products) SU9 - Manufacture of fine chemicals

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC6c - Industrial use of monomers for manufacture of thermoplastics

Covers concentrations up to 100%
Amounts used

Type	Annual amount per site
Value	500
Units	t(ons)/year
Remarks	Continuous release

Other operational conditions of use affecting environmental exposure

Emission days	200
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Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	10000 m3/d
Sludge treatment	Can be landfilled or incinerated, when in compliance with local regulations
Remarks	Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination

Type	Onsite STP
Assumed domestic sewage treatment plant flow	10000 m3/d
Sludge treatment	Can be landfilled or incinerated, when in compliance with local regulations
Remarks	Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination

Environmental factors not influenced by risk management

Receiving water dilution (fresh or marine)	400000 m3/d
Local freshwater dilution factor	40
Local marine water dilution factor	100

Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	Upgrade of the system in place or additional air treatment measures, such as wet scrubber and/or air filtration and/or thermal oxidation and/or vapour recovery systems, in order to achieve a reduction of the air emissions Prevent environmental discharge consistent with regulatory requirements No discharge of substance into waste water
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Control measures to prevent releases

Air	Typical measures to maintain workplace concentrations of airborne VOCs and particulates below respective OELs: e.g. thermal wet scrubber - gas removal and/or air filtration - particle removal and/or thermal oxidation and/or vapour recovery - adsorption
Water	Acclimated biological treatment

Conditions and measures related to external treatment of waste for disposal

Disposal	Dispose of waste product or used containers according to local regulations
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Control of worker exposure

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	2500 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Use of closed transfers of liquids from storage to production equipment (e.g. metered piped or pumped additions) Avoid accumulating electrostatic charge Use dry break couplings for material transfer Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Use engineering controls to keep exposures below the OEL or DNEL Ensure procedures and training for emergency decontamination and disposal are in place Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a full face respirator conforming to EN 136 with Type A filter or better Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear positive pressure self-contained breathing apparatus (SCBA) Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Permit to work for maintenance work Clean equipment and the work area every day

	Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	2500 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Use of closed transfers of liquids from storage to production equipment (e.g. metered piped or pumped additions) Avoid accumulating electrostatic charge Use dry break couplings for material transfer Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Use engineering controls to keep exposures below the OEL or DNEL Ensure procedures and training for emergency decontamination and disposal are in place Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a full face respirator conforming to EN 136 with Type A filter or better Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear positive pressure self-contained breathing apparatus (SCBA) Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Permit to work for maintenance work Clean equipment and the work area every day Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	2500 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Use of closed transfers of liquids from storage to production equipment (e.g. metered piped or pumped additions) Avoid accumulating electrostatic charge Use dry break couplings for material transfer Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Use engineering controls to keep exposures below the OEL or DNEL Ensure procedures and training for emergency decontamination and disposal are in place Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Conditions and measures related to	Wear a full face respirator conforming to EN 136 with Type A filter or better

personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear positive pressure self-contained breathing apparatus (SCBA) Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Permit to work for maintenance work Clean equipment and the work area every day Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	2500 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Use of closed transfers of liquids from storage to production equipment (e.g. metered piped or pumped additions) Avoid accumulating electrostatic charge Use dry break couplings for material transfer Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Use engineering controls to keep exposures below the OEL or DNEL Ensure procedures and training for emergency decontamination and disposal are in place Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a full face respirator conforming to EN 136 with Type A filter or better Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear positive pressure self-contained breathing apparatus (SCBA) Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Permit to work for maintenance work Clean equipment and the work area every day Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	2500 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day

Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Use of closed transfers of liquids from storage to production equipment (e.g. metered piped or pumped additions) Avoid accumulating electrostatic charge Use dry break couplings for material transfer Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Use engineering controls to keep exposures below the OEL or DNEL Ensure procedures and training for emergency decontamination and disposal are in place Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a full face respirator conforming to EN 136 with Type A filter or better Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear positive pressure self-contained breathing apparatus (SCBA) Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Permit to work for maintenance work Clean equipment and the work area every day Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Section 3 - Exposure estimation

Environmental release category(ies) - ERC6c - Industrial use of monomers for manufacture of thermoplastics

Predicted No Effect Concentration (PNEC)

Freshwater sediment	0.73 mg/kg w.w.
Marine sediment	0.073 mg/kg w.w.
Soil	0.03 mg/kg w.w.

Calculation method
Remarks

Used EUSES model
 Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0.043 mg/l	< 0.032
Marine water	0.017 mg/l	< 0.13
Freshwater sediment	0.034 mg/kg w.w.	< 0.032
Marine sediment	0.014 mg/kg w.w.	< 0.13
Soil	0.00053 mg/kg w.w.	< 0.003

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	3.6 mg/kg bw/d
Worker - inhalative, long-term - systemic	25.6 mg/m³
Consumer - oral, long-term - systemic	0.26 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.2 mg/kg bw/d
Consumer - inhalative, long-term - systemic	6.25 mg/m³

Calculation method

ECETOC TRA v2.0 Worker; modified version

Remarks Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Process category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio (RCR)
PROC1 - Use in closed process, no likelihood of exposure	Worker - dermal, long-term - systemic	0.003 mg/kg bw/d	0.009
PROC1 - Use in closed process, no likelihood of exposure	Worker - inhalative, long-term - systemic	0.04 mg/m ³	0.002
PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - dermal, long-term - systemic	0.014 mg/kg bw/d	0.036
PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - inhalative, long-term - systemic	2 mg/m ³	0.078
PROC3 - Use in closed batch process (synthesis or formulation)	Worker - dermal, long-term - systemic	0.007 mg/kg bw/d	0.018
PROC3 - Use in closed batch process (synthesis or formulation)	Worker - inhalative, long-term - systemic	4 mg/m ³	0.16
PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises	Worker - dermal, long-term - systemic	0.069 mg/kg bw/d	0.18
PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises	Worker - inhalative, long-term - systemic	7.9 mg/m ³	0.31
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - dermal, long-term - systemic	0.069 mg/kg bw/d	0.18
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - inhalative, long-term - systemic	5 mg/m ³	0.19

Remarks Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Section 4 - Guidance to check compliance with the exposure scenario

ECHA guidance for downstream users. Further information on the assumptions contained in this exposure scenario can be found at: http://guidance.echa.europa.eu/guidance_en.htm.

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name XIAMETER OFS-6070 Silane
Chemical name Methyltrimethoxysilane
Pure substance/mixture Substance
REACH registration number 01-2119517436-40-XXXX
CAS No 1185-55-3
EC No (EU Index No) 214-685-0
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Use as an intermediate
Type Worker
Main user group Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies) ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)
Process category(ies) PROC1 - Use in closed process, no likelihood of exposure
 PROC2 - Use in closed, continuous process with occasional controlled exposure
 PROC3 - Use in closed batch process (synthesis or formulation)
 PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Product category(ies) PC19 - Intermediate
Product Name XIAMETER OFS-6070 Silane
Sector(s) of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites SU8
 - Manufacture of bulk, large scale chemicals (including petroleum products) SU9 -
 Manufacture of fine chemicals

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)

Covers concentrations up to 100%
Amounts used

Type	Annual amount per site
Value	500
Units	t(ons)/year
Remarks	Continuous release

Other operational conditions of use affecting environmental exposure

Emission days	200
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Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	10000 m3/d
Sludge treatment	Can be landfilled or incinerated, when in compliance with local regulations
Remarks	Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination

Type	Onsite STP
Assumed domestic sewage treatment plant flow	10000 m3/d
Sludge treatment	Can be landfilled or incinerated, when in compliance with local regulations
Remarks	Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination

Environmental factors not influenced by risk management

Receiving water dilution (fresh or marine)	400000 m3/d
Local freshwater dilution factor	40
Local marine water dilution factor	100

Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	Upgrade of the system in place or additional air treatment measures, such as wet scrubber and/or air filtration and/or thermal oxidation and/or vapour recovery systems, in order to achieve a reduction of the air emissions Prevent environmental discharge consistent with regulatory requirements No discharge of substance into waste water
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Control measures to prevent releases

Air	Typical measures to maintain workplace concentrations of airborne VOCs and particulates below respective OELs: e.g. thermal wet scrubber - gas removal and/or air filtration - particle removal and/or thermal oxidation and/or vapour recovery - adsorption
Water	Acclimated biological treatment

Conditions and measures related to external treatment of waste for disposal

Disposal	Dispose of waste product or used containers according to local regulations
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Control of worker exposure

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	2500 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Use of closed transfers of liquids from storage to production equipment (e.g. metered piped or pumped additions) Avoid accumulating electrostatic charge Use dry break couplings for material transfer Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Use engineering controls to keep exposures below the OEL or DNEL Ensure procedures and training for emergency decontamination and disposal are in place Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a full face respirator conforming to EN 136 with Type A filter or better Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear positive pressure self-contained breathing apparatus (SCBA) Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Permit to work for maintenance work Clean equipment and the work area every day

	Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	2500 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Use of closed transfers of liquids from storage to production equipment (e.g. metered piped or pumped additions) Avoid accumulating electrostatic charge Use dry break couplings for material transfer Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Use engineering controls to keep exposures below the OEL or DNEL Ensure procedures and training for emergency decontamination and disposal are in place Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a full face respirator conforming to EN 136 with Type A filter or better Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear positive pressure self-contained breathing apparatus (SCBA) Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Permit to work for maintenance work Clean equipment and the work area every day Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	2500 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Use of closed transfers of liquids from storage to production equipment (e.g. metered piped or pumped additions) Avoid accumulating electrostatic charge Use dry break couplings for material transfer Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Use engineering controls to keep exposures below the OEL or DNEL Ensure procedures and training for emergency decontamination and disposal are in place Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Conditions and measures related to personal protection, hygiene and	Wear a full face respirator conforming to EN 136 with Type A filter or better Wear suitable face shield

health evaluation	Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear positive pressure self-contained breathing apparatus (SCBA) Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Permit to work for maintenance work Clean equipment and the work area every day Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	2500 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Use of closed transfers of liquids from storage to production equipment (e.g. metered piped or pumped additions) Avoid accumulating electrostatic charge Use dry break couplings for material transfer Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Use engineering controls to keep exposures below the OEL or DNEL Ensure procedures and training for emergency decontamination and disposal are in place Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a full face respirator conforming to EN 136 with Type A filter or better Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear positive pressure self-contained breathing apparatus (SCBA) Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Permit to work for maintenance work Clean equipment and the work area every day Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	2500 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards	Drain down and flush system prior to equipment break-in or maintenance Use of closed transfers of liquids from storage to production equipment (e.g. metered piped

the worker	or pumped additions) Avoid accumulating electrostatic charge Use dry break couplings for material transfer Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Use engineering controls to keep exposures below the OEL or DNEL Ensure procedures and training for emergency decontamination and disposal are in place Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a full face respirator conforming to EN 136 with Type A filter or better Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear positive pressure self-contained breathing apparatus (SCBA) Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Permit to work for maintenance work Clean equipment and the work area every day Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Section 3 - Exposure estimation

Environmental release category(ies) - ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)

Predicted No Effect Concentration (PNEC)

Freshwater sediment	0.73 mg/kg w.w.
Marine sediment	0.073 mg/kg w.w.
Soil	0.03 mg/kg w.w.

Calculation method

Used EUSES model

Remarks

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0.043 mg/l	< 0.032
Marine water	0.017 mg/l	< 0.13
Freshwater sediment	0.034 mg/kg w.w.	< 0.032
Marine sediment	0.014 mg/kg w.w.	< 0.13
Soil	0.00053 mg/kg w.w.	< 0.003

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	3.6 mg/kg bw/d
Worker - inhalative, long-term - systemic	25.6 mg/m³
Consumer - oral, long-term - systemic	0.26 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.2 mg/kg bw/d
Consumer - inhalative, long-term - systemic	6.25 mg/m³

Calculation method

ECETOC TRA v2.0 Worker; modified version

Remarks

Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Process category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio (RCR)
PROC1 - Use in closed process, no likelihood of exposure	Worker - dermal, long-term - systemic	0.003 mg/kg bw/d	0.009
PROC1 - Use in closed process, no likelihood of exposure	Worker - inhalative, long-term - systemic	0.04 mg/m ³	0.002
PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - dermal, long-term - systemic	0.014 mg/kg bw/d	0.036
PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - inhalative, long-term - systemic	2 mg/m ³	0.078
PROC3 - Use in closed batch process (synthesis or formulation)	Worker - dermal, long-term - systemic	0.007 mg/kg bw/d	0.018
PROC3 - Use in closed batch process (synthesis or formulation)	Worker - inhalative, long-term - systemic	4 mg/m ³	0.16
PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises	Worker - dermal, long-term - systemic	0.069 mg/kg bw/d	0.18
PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises	Worker - inhalative, long-term - systemic	7.9 mg/m ³	0.31
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - dermal, long-term - systemic	0.069 mg/kg bw/d	0.18
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - inhalative, long-term - systemic	5 mg/m ³	0.19

Remarks Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Section 4 - Guidance to check compliance with the exposure scenario

ECHA guidance for downstream users. Further information on the assumptions contained in this exposure scenario can be found at: http://guidance.echa.europa.eu/guidance_en.htm.

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name XIAMETER OFS-6070 Silane
Chemical name Methyltrimethoxysilane
Pure substance/mixture Substance
REACH registration number 01-2119517436-40-XXXX
CAS No 1185-55-3
EC No (EU Index No) 214-685-0
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Used for formulation of coatings at downstream industrial sites
Type Worker
Main user group Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies) ERC2 - Formulation of preparations (mixtures)
Process category(ies) PROC3 - Use in closed batch process (synthesis or formulation)
 PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
 PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)
 PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Product category(ies) PC9a - Coatings and paints, thinners, paint removers
Product Name XIAMETER OFS-6070 Silane
Sector(s) of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
 SU10 - Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU19 - Building and construction work

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC2 - Formulation of preparations (mixtures)

Covers concentrations up to 5%

Other operational conditions of use affecting environmental exposure

Emission days	200
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Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d

Environmental factors not influenced by risk management

Receiving water dilution (fresh or marine)	20000 m3/d
Local freshwater dilution factor	10
Local marine water dilution factor	100

Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	Prevent environmental discharge consistent with regulatory requirements No discharge of substance into waste water
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Control measures to prevent releases

Water	Acclimated biological treatment
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Conditions and measures related to external treatment of waste for disposal

Disposal	Dispose of waste product or used containers according to local regulations
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Control of worker exposure

Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Covers concentrations up to	5%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Covers concentrations up to	5%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and	Supervision in place to check that the RMMs in place are being used correctly and OCs followed

exposure	Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)
Covers concentrations up to	5%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Covers concentrations up to	5%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Section 3 - Exposure estimation

Environmental release category(ies) - ERC2 - Formulation of preparations (mixtures)

**Predicted No Effect Concentration
(PNEC)**

Freshwater sediment	0.73 mg/kg w.w.
Marine sediment	0.073 mg/kg w.w.
Soil	0.03 mg/kg w.w.

Calculation method

Used EUSES model

Remarks

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	3.6 mg/kg bw/d
Worker - inhalative, long-term - systemic	25.6 mg/m ³
Consumer - oral, long-term - systemic	0.26 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.2 mg/kg bw/d
Consumer - inhalative, long-term - systemic	6.25 mg/m ³

Calculation method

ECETOC TRA v2.0 Worker; modified version

Remarks

Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Process category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio (RCR)
PROC3 - Use in closed batch process (synthesis or formulation)	Worker - dermal, long-term - systemic	0.001 mg/kg bw/d	0.004
PROC3 - Use in closed batch process (synthesis or formulation)	Worker - inhalative, long-term - systemic	0.79 mg/m ³	0.031
PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises	Worker - dermal, long-term - systemic	0.014 mg/kg bw/d	0.036
PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises	Worker - inhalative, long-term - systemic	1.6 mg/m ³	0.062
PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)	Worker - dermal, long-term - systemic	0.027 mg/kg bw/d	0.072
PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)	Worker - inhalative, long-term - systemic	4 mg/m ³	0.16
PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities	Worker - dermal, long-term - systemic	0.082 mg/kg bw/d	0.22
PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities	Worker - inhalative, long-term - systemic	12 mg/m ³	0.47
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - dermal, long-term - systemic	0.069 mg/kg bw/d	0.18
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - inhalative, long-term - systemic	5 mg/m ³	0.19

PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	Worker - dermal, long-term - systemic	0.014 mg/kg bw/d	0.036
PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	Worker - inhalative, long-term - systemic	4 mg/m ³	0.16

Remarks Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Section 4 - Guidance to check compliance with the exposure scenario

ECHA guidance for downstream users. Further information on the assumptions contained in this exposure scenario can be found at: http://guidance.echa.europa.eu/guidance_en.htm.

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name XIAMETER OFS-6070 Silane
Chemical name Methyltrimethoxysilane
Pure substance/mixture Substance
REACH registration number 01-2119517436-40-XXXX
CAS No 1185-55-3
EC No (EU Index No) 214-685-0
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Coatings
Type Worker
Main user group Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies) ERC5 - Industrial use resulting in inclusion into or onto a matrix
Process category(ies) PROC7 - Industrial spraying
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
 PROC10 - Roller application or brushing
 PROC13 - Treatment of articles by dipping and pouring
 PC9a - Coatings and paints, thinners, paint removers

Product category(ies)
Product Name XIAMETER OFS-6070 Silane
Sector(s) of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites SU4 - Manufacture of food products SU17 - General manufacturing SU18 - Manufacture of furniture SU19 - Building and construction work

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC5 - Industrial use resulting in inclusion into or onto a matrix

Covers concentrations up to 5%
Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Remarks	Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination

Type	Onsite STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Remarks	Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination

Environmental factors not influenced by risk management

Receiving water dilution (fresh or marine)	20000 m3/d
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Local freshwater dilution factor	10
Local marine water dilution factor	100

Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	Typical measures to maintain workplace concentrations of airborne VOCs and particulates below respective OELs: e.g. thermal wet scrubber - gas removal and/or air filtration - particle removal and/or thermal oxidation and/or vapour recovery - adsorption
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Control measures to prevent releases

Water	Acclimated biological treatment
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Conditions and measures related to external treatment of waste for disposal

Disposal	Dispose of waste product or used containers according to local regulations
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Control of worker exposure

Process category(ies)	PROC7 - Industrial spraying
Covers concentrations up to	5%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Covers concentrations up to	5%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)

Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Covers concentrations up to	5%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC10 - Roller application or brushing
Covers concentrations up to	5%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 1 hour
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC13 - Treatment of articles by dipping and pouring
Covers concentrations up to	5%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCS followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Section 3 - Exposure estimation

Environmental release category(ies) - ERC5 - Industrial use resulting in inclusion into or onto a matrix

Predicted No Effect Concentration (PNEC)

Freshwater sediment	0.73 mg/kg w.w.
Marine sediment	0.073 mg/kg w.w.
Soil	0.03 mg/kg w.w.

Calculation method

Used EUSES model

Remarks

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	3.6 mg/kg bw/d
Worker - inhalative, long-term - systemic	25.6 mg/m ³
Consumer - oral, long-term - systemic	0.26 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.2 mg/kg bw/d
Consumer - inhalative, long-term - systemic	6.25 mg/m ³

Calculation method

ECETOC TRA v2.0 Worker; modified version

Remarks

Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Process category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio (RCR)
PROC7 - Industrial spraying	Worker - dermal, long-term - systemic	0.043 mg/kg bw/d	0.11
PROC7 - Industrial spraying	Worker - inhalative, long-term	9.9 mg/m ³	0.39

	- systemic		
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - dermal, long-term - systemic	0.014 mg/kg bw/d	0.036
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - inhalative, long-term - systemic	0.99 mg/m ³	0.039
PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	Worker - dermal, long-term - systemic	0.014 mg/kg bw/d	0.036
PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	Worker - inhalative, long-term - systemic	4 mg/m ³	0.16
PROC10 - Roller application or brushing	Worker - dermal, long-term - systemic	0.11 mg/kg bw/d	0.29
PROC10 - Roller application or brushing	Worker - inhalative, long-term - systemic	0.79 mg/m ³	0.031
PROC13 - Treatment of articles by dipping and pouring	Worker - dermal, long-term - systemic	0.027 mg/kg bw/d	0.072
PROC13 - Treatment of articles by dipping and pouring	Worker - inhalative, long-term - systemic	4 mg/m ³	0.16
Remarks	Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented		

Section 4 - Guidance to check compliance with the exposure scenario

ECHA guidance for downstream users. Further information on the assumptions contained in this exposure scenario can be found at: http://guidance.echa.europa.eu/guidance_en.htm.

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name XIAMETER OFS-6070 Silane
Chemical name Methyltrimethoxysilane
Pure substance/mixture Substance
REACH registration number 01-2119517436-40-XXXX
CAS No 1185-55-3
EC No (EU Index No) 214-685-0
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Coatings
Type Worker
Main user group Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies) ERC5 - Industrial use resulting in inclusion into or onto a matrix
Process category(ies) PROC7 - Industrial spraying
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Product category(ies) PC9a - Coatings and paints, thinners, paint removers
Product Name XIAMETER OFS-6070 Silane
Sector(s) of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
 SU17 - General manufacturing SU19 - Building and construction work

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC5 - Industrial use resulting in inclusion into or onto a matrix

Covers concentrations up to 1%
Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Remarks	Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination

Type	Onsite STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Remarks	Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination

Environmental factors not influenced by risk management

Receiving water dilution (fresh or marine)	20000 m3/d
Local freshwater dilution factor	10
Local marine water dilution factor	100

Control measures to prevent releases

Water	Acclimated biological treatment
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Conditions and measures related to external treatment of waste for disposal

Disposal	Dispose of waste product or used containers according to local regulations
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Control of worker exposure	
Process category(ies)	PROC7 - Industrial spraying
Covers concentrations up to	1%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Covers concentrations up to	1%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Section 3 - Exposure estimation

Environmental release category(ies) - ERC5 - Industrial use resulting in inclusion into or onto a matrix

Predicted No Effect Concentration (PNEC)

Freshwater sediment	0.73 mg/kg w.w.
Marine sediment	0.073 mg/kg w.w.
Soil	0.03 mg/kg w.w.

Calculation method

Used EUSES model

Remarks

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	3.6 mg/kg bw/d
Worker - inhalative, long-term - systemic	25.6 mg/m ³
Consumer - oral, long-term - systemic	0.26 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.2 mg/kg bw/d
Consumer - inhalative, long-term - systemic	6.25 mg/m ³

Calculation method

ECETOC TRA v2.0 Worker; modified version

Remarks

Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Process category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio (RCR)
PROC7 - Industrial spraying	Worker - dermal, long-term - systemic	0.002 mg/kg bw/d	0.006
PROC7 - Industrial spraying	Worker - inhalative, long-term - systemic	5 mg/m ³	0.19
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - dermal, long-term - systemic	< 0.001 mg/kg bw/d	0.002
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - inhalative, long-term - systemic	0.5 mg/m ³	0.019

Remarks

Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Section 4 - Guidance to check compliance with the exposure scenario

ECHA guidance for downstream users. Further information on the assumptions contained in this exposure scenario can be found at: http://guidance.echa.europa.eu/guidance_en.htm.

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name XIAMETER OFS-6070 Silane
Chemical name Methyltrimethoxysilane
Pure substance/mixture Substance
REACH registration number 01-2119517436-40-XXXX
CAS No 1185-55-3
EC No (EU Index No) 214-685-0
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Use in laboratories
Type Worker
Main user group Industrial uses: Uses of substances as such or in preparations at industrial sites
Process category(ies) PROC15 - Use as laboratory reagent
Product category(ies) PC21 - Laboratory chemicals
Product Name XIAMETER OFS-6070 Silane
Sector(s) of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
 SU24 - Scientific research and development

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Covers concentrations up to 100%
Conditions and measures related to external treatment of waste for disposal

Disposal	Dispose of waste product or used containers according to local regulations
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Control of worker exposure	
Process category(ies)	PROC15 - Use as laboratory reagent
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	< 0.5 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent	Supervision in place to check that the RMMs in place are being used correctly and OCs

/limit releases, dispersion and exposure	followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Section 3 - Exposure estimation

Predicted No Effect Concentration (PNEC)

Freshwater sediment	0.73 mg/kg w.w.
Marine sediment	0.073 mg/kg w.w.
Soil	0.03 mg/kg w.w.

Calculation method

Used EUSES model

Remarks

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	3.6 mg/kg bw/d
Worker - inhalative, long-term - systemic	25.6 mg/m ³
Consumer - oral, long-term - systemic	0.26 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.2 mg/kg bw/d
Consumer - inhalative, long-term - systemic	6.25 mg/m ³

Calculation method

ECETOC TRA v2.0 Worker; modified version

Remarks

Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Process category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio (RCR)
PROC15 - Use as laboratory reagent	Worker - dermal, long-term - systemic	0.003 mg/kg bw/d	0.009
PROC15 - Use as laboratory reagent	Worker - inhalative, long-term - systemic	4 mg/m ³	0.16

Remarks

Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Section 4 - Guidance to check compliance with the exposure scenario

ECHA guidance for downstream users. Further information on the assumptions contained in this exposure scenario can be found at: http://guidance.echa.europa.eu/guidance_en.htm.

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMS or a site-specific chemical safety assessment is required.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name	XIAMETER OFS-6070 Silane
Chemical name	Methyltrimethoxysilane
Pure substance/mixture	Substance
REACH registration number	01-2119517436-40-XXXX
CAS No	1185-55-3
EC No (EU Index No)	214-685-0
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford GBR
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306
E-mail address	SDS.EMEA@univarsolutions.com

Section 1 - Title

Title	Coatings
Type	Worker
Main user group	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Environmental release category(ies)	ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix
Process category(ies)	PROC10 - Roller application or brushing PROC11 - Non industrial spraying PROC19 - Hand-mixing with intimate contact and only PPE available
Product category(ies)	PC9a - Coatings and paints, thinners, paint removers
Product Name	XIAMETER OFS-6070 Silane
Sector(s) of use	SU19 - Building and construction work SU22 - Professional uses

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix
- ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix

Covers concentrations up to 17 ppm
Other operational conditions of use affecting environmental exposure

Emission days	365
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Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d

Environmental factors not influenced by risk management

Receiving water dilution (fresh or marine)	20000 m3/d
Local freshwater dilution factor	10
Local marine water dilution factor	100

Control measures to prevent releases

Water	Acclimated biological treatment
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Conditions and measures related to external treatment of waste for disposal

Disposal	Dispose of waste product or used containers according to local regulations
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Control of worker exposure	
Process category(ies)	PROC10 - Roller application or brushing
Covers concentrations up to	17 ppm
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable gloves (tested to EN 374) and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC10 - Roller application or brushing
Covers concentrations up to	17 ppm
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable gloves (tested to EN 374) and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors
Indoor/Outdoor use	Outdoor
Assumes process temperature up to	20 C

Process category(ies)	PROC11 - Non industrial spraying
Covers concentrations up to	17 ppm
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to	Avoid accumulating electrostatic charge

control dispersion from source towards the worker	Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable gloves (tested to EN 374) and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC11 - Non industrial spraying
Covers concentrations up to	17 ppm
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable gloves (tested to EN 374) and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors
Indoor/Outdoor use	Outdoor
Assumes process temperature up to	20 C

Process category(ies)	PROC19 - Hand-mixing with intimate contact and only PPE available
Covers concentrations up to	17 ppm
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable gloves (tested to EN 374) and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures

	Locate bulk storage outdoors
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C
Process category(ies)	PROC19 - Hand-mixing with intimate contact and only PPE available
Covers concentrations up to	17 ppm
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable gloves (tested to EN 374) and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors
Indoor/Outdoor use	Outdoor
Assumes process temperature up to	20 C

Section 3 - Exposure estimation

**Environmental release category(ies) - ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix
- ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix**

Predicted No Effect Concentration (PNEC)

Freshwater sediment	0.73 mg/kg w.w.
Marine sediment	0.073 mg/kg w.w.
Soil	0.03 mg/kg w.w.

Calculation method Remarks

Used EUSES model
Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	3.6 mg/kg bw/d
Worker - inhalative, long-term - systemic	25.6 mg/m ³
Consumer - oral, long-term - systemic	0.26 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.2 mg/kg bw/d
Consumer - inhalative, long-term - systemic	6.25 mg/m ³

Calculation method

ECETOC TRA v2.0 Worker; modified version
Used Stoffenmanager model

Remarks

Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Process category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio (RCR)
PROC10 - Roller application or brushing	Worker - dermal, long-term - systemic	< 0.001 mg/kg bw/d	0.003
PROC10 - Roller application or brushing	Worker - inhalative, long-term - systemic	25.04 mg/m ³	0.98
PROC10 - Roller application or brushing	Worker - dermal, long-term - systemic	< 0.001 mg/kg bw/d	0.003
PROC10 - Roller application or brushing	Worker - inhalative, long-term - systemic	9.72 mg/m ³	0.38
PROC11 - Non industrial spraying	Worker - dermal, long-term - systemic	0.004 mg/kg bw/d	0.01
PROC11 - Non industrial spraying	Worker - inhalative, long-term - systemic	25.04 mg/m ³	0.98
PROC11 - Non industrial spraying	Worker - dermal, long-term - systemic	0.004 mg/kg bw/d	0.01
PROC11 - Non industrial spraying	Worker - inhalative, long-term - systemic	9.72 mg/m ³	0.38
PROC19 - Hand-mixing with intimate contact and only PPE available	Worker - dermal, long-term - systemic	0.005 mg/kg bw/d	0.013
PROC19 - Hand-mixing with intimate contact and only PPE available	Worker - inhalative, long-term - systemic	25.04 mg/m ³	0.98
PROC19 - Hand-mixing with intimate contact and only PPE available	Worker - dermal, long-term - systemic	0.005 mg/kg bw/d	0.013
PROC19 - Hand-mixing with intimate contact and only PPE available	Worker - inhalative, long-term - systemic	9.72 mg/m ³	0.38

Remarks Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Section 4 - Guidance to check compliance with the exposure scenario

ECHA guidance for downstream users. Further information on the assumptions contained in this exposure scenario can be found at: http://guidance.echa.europa.eu/guidance_en.htm.

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name	XIAMETER OFS-6070 Silane
Chemical name	Methyltrimethoxysilane
Pure substance/mixture	Substance
REACH registration number	01-2119517436-40-XXXX
CAS No	1185-55-3
EC No (EU Index No)	214-685-0
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford GBR
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306
E-mail address	SDS.EMEA@univarsolutions.com

Section 1 - Title

Title	Formulation and use of non-metal surface treatment solutions/dispersions and/or mass hydrophobation.
Type	Worker
Main user group	Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies)	ERC2 - Formulation of preparations (mixtures) ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates) ERC6d - Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers
Process category(ies)	PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC7 - Industrial spraying PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10 - Roller application or brushing PROC13 - Treatment of articles by dipping and pouring PC15 - Non-metal-surface treatment products
Product category(ies)	PC15 - Non-metal-surface treatment products
Product Name	XIAMETER OFS-6070 Silane
Sector(s) of use	SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites SU10 - Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU11 - Manufacture of rubber products SU12 - Manufacture of plastics products, including compounding and conversion SU13 - Manufacture of other non-metallic mineral products SU19 - Building and construction work

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC2 - Formulation of preparations (mixtures)
- ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)
- ERC6d - Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers

Covers concentrations up to 100%

Amounts used

Remarks	Continuous release
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Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
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**ES00651 - XIAMETER™ OFS-6070 Silane (214-685-0) -
Formulation or re-packing; Formulation and use of
non-metal surface treatment
solutions/dispersions and/or mass hydrophobation**

Revision date 24-Jan-2025

Assumed domestic sewage treatment plant flow	2000 m3/d
Remarks	Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination

Type	Onsite STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Remarks	Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination

Environmental factors not influenced by risk management

Receiving water dilution (fresh or marine)	20000 m3/d
Local freshwater dilution factor	10
Local marine water dilution factor	100

Control measures to prevent releases

Water	Acclimated biological treatment
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Conditions and measures related to external treatment of waste for disposal

Disposal	Dispose of waste product or used containers according to local regulations
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Control of worker exposure	
Process category(ies)	PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out operation for more than 1 hour
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC7 - Industrial spraying
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out operation for more than 1 hour
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).

	1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 15 minutes
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 1 hour
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure

	Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out operation for more than 1 hour
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC10 - Roller application or brushing
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 15 minutes
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)

	changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C
Process category(ies)	PROC13 - Treatment of articles by dipping and pouring
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out operation for more than 1 hour
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Section 3 - Exposure estimation

Environmental release category(ies) - ERC2 - Formulation of preparations (mixtures)

- ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)

- ERC6d - Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers

Predicted No Effect Concentration (PNEC)

Freshwater sediment	0.73 mg/kg w.w.
Marine sediment	0.073 mg/kg w.w.
Soil	0.03 mg/kg w.w.

Calculation method

Used EUSES model

Remarks

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0.043 mg/l	< 0.032
Marine water	0.017 mg/l	< 0.13
Freshwater sediment	0.034 mg/kg w.w.	< 0.032
Marine sediment	0.014 mg/kg w.w.	< 0.13

Soil	0.00053 mg/kg w.w.	< 0.003
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Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	3.6 mg/kg bw/d
Worker - inhalative, long-term - systemic	25.6 mg/m ³
Consumer - oral, long-term - systemic	0.26 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.2 mg/kg bw/d
Consumer - inhalative, long-term - systemic	6.25 mg/m ³

Calculation method

ECETOC TRA v2.0 Worker; modified version

Remarks

Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Process category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio (RCR)
PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)	Worker - dermal, long-term - systemic	0.027 mg/kg bw/d	0.072
PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)	Worker - inhalative, long-term - systemic	4 mg/m ³	0.16
PROC7 - Industrial spraying	Worker - dermal, long-term - systemic	0.043 mg/kg bw/d	0.11
PROC7 - Industrial spraying	Worker - inhalative, long-term - systemic	9.9 mg/m ³	0.39
PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities	Worker - dermal, long-term - systemic	0.014 mg/kg bw/d	0.036
PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities	Worker - inhalative, long-term - systemic	2 mg/m ³	0.78
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - dermal, long-term - systemic	0.014 mg/kg bw/d	0.036
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - inhalative, long-term - systemic	0.99 mg/m ³	0.039
PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	Worker - dermal, long-term - systemic	0.014 mg/kg bw/d	0.036
PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	Worker - inhalative, long-term - systemic	4 mg/m ³	0.16
PROC10 - Roller application or brushing	Worker - dermal, long-term - systemic	0.27 mg/kg bw/d	0.72
PROC10 - Roller application or brushing	Worker - inhalative, long-term - systemic	2 mg/m ³	0.078
PROC13 - Treatment of articles by dipping and pouring	Worker - dermal, long-term - systemic	0.027 mg/kg bw/d	0.072
PROC13 - Treatment of articles by	Worker - inhalative, long-term	4 mg/m ³	0.16

dipping and pouring	- systemic		
Remarks	Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented		

Section 4 - Guidance to check compliance with the exposure scenario

ECHA guidance for downstream users. Further information on the assumptions contained in this exposure scenario can be found at. http://guidance.echa.europa.eu/guidance_en.htm.

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMS or a site-specific chemical safety assessment is required.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name XIAMETER OFS-6070 Silane
Chemical name Methyltrimethoxysilane
Pure substance/mixture Substance
REACH registration number 01-2119517436-40-XXXX
CAS No 1185-55-3
EC No (EU Index No) 214-685-0
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Formulation Sealant
Type Worker
Main user group Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies) ERC2 - Formulation of preparations (mixtures)
Process category(ies) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
 PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)
 PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Product category(ies) PC1 - Adhesives, sealants
Product Name XIAMETER OFS-6070 Silane
Sector(s) of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
 SU10 - Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC2 - Formulation of preparations (mixtures)

Covers concentrations up to 5%
Amounts used

Type	Annual amount per site
Value	200
Units	t(ons)/year
Remarks	Continuous release

Other operational conditions of use affecting environmental exposure

Emission days	220
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Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Sludge treatment	Can be landfilled or incinerated, when in compliance with local regulations
Remarks	Required removal efficiency for wastewater can be achieved using onsite/offsite

	technologies, either alone or in combination
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Type	Onsite STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Sludge treatment	Can be landfilled or incinerated, when in compliance with local regulations
Remarks	Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination

Environmental factors not influenced by risk management

Receiving water dilution (fresh or marine)	20000 m3/d
Local freshwater dilution factor	10
Local marine water dilution factor	100

Control measures to prevent releases

Water	Acclimated biological treatment
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Conditions and measures related to external treatment of waste for disposal

Disposal	Dispose of waste product or used containers according to local regulations
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Control of worker exposure

Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Covers concentrations up to	5%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	900 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)
Covers concentrations up to	5%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	900 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day

Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	900 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	900 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure

	Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Covers concentrations up to	5%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	900 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Section 3 - Exposure estimation

Environmental release category(ies) - ERC2 - Formulation of preparations (mixtures)

Predicted No Effect Concentration (PNEC)

Freshwater sediment	0.73 mg/kg w.w.
Marine sediment	0.073 mg/kg w.w.
Soil	0.03 mg/kg w.w.

Calculation method

Used EUSES model

Remarks

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0.095 mg/l	< 0.072
Marine water	0.0095 mg/l	< 0.072
Freshwater sediment	0.075 mg/kg w.w.	< 0.072
Marine sediment	0.0075 mg/kg w.w.	< 0.072
Soil	0.0012 mg/kg w.w.	< 0.007

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	3.6 mg/kg bw/d
Worker - inhalative, long-term - systemic	25.6 mg/m ³
Consumer - oral, long-term - systemic	0.26 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.2 mg/kg bw/d
Consumer - inhalative, long-term - systemic	6.25 mg/m ³

Calculation method

ECETOC TRA v2.0 Worker; modified version

Remarks

Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Process category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio (RCR)
PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises	Worker - dermal, long-term - systemic	0.003 mg/kg bw/d	0.009
PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises	Worker - inhalative, long-term - systemic	1.6 mg/m ³	0.062
PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)	Worker - dermal, long-term - systemic	0.007 mg/kg bw/d	0.018
PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)	Worker - inhalative, long-term - systemic	4 mg/m ³	0.16
PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities	Worker - dermal, long-term - systemic	0.082 mg/kg bw/d	0.22
PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities	Worker - inhalative, long-term - systemic	12 mg/m ³	0.47
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - dermal, long-term - systemic	0.069 mg/kg bw/d	0.18
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - inhalative, long-term - systemic	5 mg/m ³	0.19
PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	Worker - dermal, long-term - systemic	0.003 mg/kg bw/d	0.009
PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	Worker - inhalative, long-term - systemic	4 mg/m ³	0.16

Remarks

Predicted exposures are not expected to exceed the DN(M)EL when the risk management

measures/operational conditions outlined in section 2 are implemented

Section 4 - Guidance to check compliance with the exposure scenario

ECHA guidance for downstream users. Further information on the assumptions contained in this exposure scenario can be found at: http://guidance.echa.europa.eu/guidance_en.htm.

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name XIAMETER OFS-6070 Silane
Chemical name Methyltrimethoxysilane
Pure substance/mixture Substance
REACH registration number 01-2119517436-40-XXXX
CAS No 1185-55-3
EC No (EU Index No) 214-685-0
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Sealant
Type Worker
Main user group Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies) ERC5 - Industrial use resulting in inclusion into or onto a matrix
Process category(ies) PROC3 - Use in closed batch process (synthesis or formulation)
 PROC7 - Industrial spraying
 PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
 PROC10 - Roller application or brushing
 PROC13 - Treatment of articles by dipping and pouring
 PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising

Product category(ies) PC1 - Adhesives, sealants
Product Name XIAMETER OFS-6070 Silane
Sector(s) of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites SU5 - Manufacture of textiles, leather, fur SU6b - Manufacture of pulp, paper and paper products SU12 - Manufacture of plastics products, including compounding and conversion SU13 - Manufacture of other non-metallic mineral products SU15 - Manufacture of fabricated metal products, except machinery and equipment SU16 - Manufacture of computer, electronic and optical products, electrical equipment SU17 - General manufacturing SU19 - Building and construction work

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC5 - Industrial use resulting in inclusion into or onto a matrix

Covers concentrations up to 5%
Amounts used

Type	Annual amount per site
Value	100
Units	t(ons)/year
Remarks	Continuous release

Other operational conditions of use affecting environmental exposure

Emission days	220
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Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Remarks	Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination

Type	Onsite STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Remarks	Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination

Environmental factors not influenced by risk management

Receiving water dilution (fresh or marine)	20000 m3/d
Local freshwater dilution factor	10
Local marine water dilution factor	100

Control measures to prevent releases

Water	Acclimated biological treatment
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Conditions and measures related to external treatment of waste for disposal

Disposal	Dispose of waste product or used containers according to local regulations
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Control of worker exposure	
Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Covers concentrations up to	5%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	500 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC7 - Industrial spraying
Covers concentrations up to	5%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	500 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours

Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Covers concentrations up to	5%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	500 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Covers concentrations up to	5%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	500 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise

	exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC10 - Roller application or brushing
Covers concentrations up to	5%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	500 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC13 - Treatment of articles by dipping and pouring
Covers concentrations up to	5%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	500 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)

	changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C
Process category(ies)	PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising
Covers concentrations up to	5%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	500 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Section 3 - Exposure estimation

Environmental release category(ies) - ERC5 - Industrial use resulting in inclusion into or onto a matrix

Predicted No Effect Concentration (PNEC)

Freshwater sediment	0.73 mg/kg w.w.
Marine sediment	0.073 mg/kg w.w.
Soil	0.03 mg/kg w.w.

**Calculation method
Remarks**

Used EUSES model
Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0.0005 mg/l	< 0.001
Marine water	0.000049 mg/l	< 0.001
Freshwater sediment	0.0004 mg/kg w.w.	< 0.001
Marine sediment	0.000039 mg/kg w.w.	< 0.001
Soil	0.00014 mg/kg w.w.	< 0.001

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	3.6 mg/kg bw/d
Worker - inhalative, long-term - systemic	25.6 mg/m ³
Consumer - oral, long-term - systemic	0.26 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.2 mg/kg bw/d
Consumer - inhalative, long-term - systemic	6.25 mg/m ³

Calculation method

ECETOC TRA v2.0 Worker; modified version

Remarks

Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Process category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio (RCR)
PROC3 - Use in closed batch process (synthesis or formulation)	Worker - dermal, long-term - systemic	< 0.001 mg/kg bw/d	< 0.001
PROC3 - Use in closed batch process (synthesis or formulation)	Worker - inhalative, long-term - systemic	0.79 mg/m ³	0.031
PROC7 - Industrial spraying	Worker - dermal, long-term - systemic	0.011 mg/kg bw/d	0.028
PROC7 - Industrial spraying	Worker - inhalative, long-term - systemic	9.9 mg/m ³	0.39
PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities	Worker - dermal, long-term - systemic	0.007 mg/kg bw/d	0.018
PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities	Worker - inhalative, long-term - systemic	4 mg/m ³	0.16
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - dermal, long-term - systemic	0.003 mg/kg bw/d	0.009
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - inhalative, long-term - systemic	0.99 mg/m ³	0.039
PROC10 - Roller application or brushing	Worker - dermal, long-term - systemic	0.14 mg/kg bw/d	0.36
PROC10 - Roller application or brushing	Worker - inhalative, long-term - systemic	4 mg/m ³	0.16
PROC13 - Treatment of articles by dipping and pouring	Worker - dermal, long-term - systemic	0.007 mg/kg bw/d	0.018
PROC13 - Treatment of articles by dipping and pouring	Worker - inhalative, long-term - systemic	4 mg/m ³	0.16
PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising	Worker - dermal, long-term - systemic	0.002 mg/kg bw/d	0.005
PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising	Worker - inhalative, long-term - systemic	4 mg/m ³	0.16

Remarks

Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Section 4 - Guidance to check compliance with the exposure scenario

ECHA guidance for downstream users. Further information on the assumptions contained in this exposure scenario can be found at: http://guidance.echa.europa.eu/guidance_en.htm.

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMS or a site-specific chemical safety assessment is required.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name XIAMETER OFS-6070 Silane
Chemical name Methyltrimethoxysilane
Pure substance/mixture Substance
REACH registration number 01-2119517436-40-XXXX
CAS No 1185-55-3
EC No (EU Index No) 214-685-0
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Sealant
Type Worker
Main user group Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Environmental release category(ies) ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix
Process category(ies) PROC19 - Hand-mixing with intimate contact and only PPE available
Product category(ies) PC1 - Adhesives, sealants
Product Name XIAMETER OFS-6070 Silane
Sector(s) of use SU22 - Professional uses

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix
 - ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix

Covers concentrations up to 0.6%

Amounts used

Type	Annual amount per site
Value	0.5
Units	t(ons)/year

Other operational conditions of use affecting environmental exposure

Emission days	365
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Environmental factors not influenced by risk management

Receiving water dilution (fresh or marine)	20000 m3/d
Local freshwater dilution factor	10
Local marine water dilution factor	100

Conditions and measures related to external treatment of waste for disposal

Disposal	Dispose of waste product or used containers according to local regulations
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Control of worker exposure

Process category(ies)	PROC19 - Hand-mixing with intimate contact and only PPE available
Covers concentrations up to	0.6%

Physical form of product	Liquid
Vapour pressure	3000 Pa
Amounts used	1.4 kg/d
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C
Use in room with a volume of minimum	30 m3

Section 3 - Exposure estimation

Environmental release category(ies) - ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix
- ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix

Predicted No Effect Concentration (PNEC)

Freshwater sediment	0.73 mg/kg w.w.
Marine sediment	0.073 mg/kg w.w.
Soil	0.03 mg/kg w.w.

Calculation method

Used EUSES model

Remarks

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	3.6 mg/kg bw/d
Worker - inhalative, long-term - systemic	25.6 mg/m ³
Consumer - oral, long-term - systemic	0.26 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.2 mg/kg bw/d
Consumer - inhalative, long-term - systemic	6.25 mg/m ³

Calculation method

Other measured data

Remarks

Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Process category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio (RCR)
PROC19 - Hand-mixing with intimate contact and only PPE available	Worker - dermal, long-term - systemic	< 0.001 mg/kg bw/d	< 0.001
PROC19 - Hand-mixing with intimate contact and only PPE available	Worker - inhalative, long-term - systemic	0.27 mg/m ³	0.01

Remarks	Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented
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Section 4 - Guidance to check compliance with the exposure scenario

ECHA guidance for downstream users. Further information on the assumptions contained in this exposure scenario can be found at. http://guidance.echa.europa.eu/guidance_en.htm.

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name XIAMETER OFS-6070 Silane
Chemical name Methyltrimethoxysilane
Pure substance/mixture Substance
REACH registration number 01-2119517436-40-XXXX
CAS No 1185-55-3
EC No (EU Index No) 214-685-0
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Electrical and electronic products, e.g. computers, office equipment, video and audio recording, communication equipment
Type Worker
Main user group Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies) ERC2 - Formulation of preparations (mixtures) ERC6b - Industrial use of reactive processing aids
Process category(ies) PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)
 PROC7 - Industrial spraying
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
 PROC10 - Roller application or brushing
 PROC13 - Treatment of articles by dipping and pouring
Product category(ies) PC9a - Coatings and paints, thinners, paint removers PC16 - Heat transfer fluids PC32 - Polymer preparations and compounds PC33 - Semiconductor(s)
Product Name XIAMETER OFS-6070 Silane
Sector(s) of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
 SU10 - Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU16 - Manufacture of computer, electronic and optical products, electrical equipment

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC2 - Formulation of preparations (mixtures)
 - ERC6b - Industrial use of reactive processing aids

Covers concentrations up to 25%

Conditions and measures related to external treatment of waste for disposal

Disposal	Dispose of waste product or used containers according to local regulations
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Control of worker exposure

Process category(ies)	PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)
Covers concentrations up to	25%
Physical form of product	Liquid
Vapour pressure	3000 Pa

Use at industrial sites; Used in electronics applications

Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC7 - Industrial spraying
Covers concentrations up to	25%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 1 hour
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Covers concentrations up to	25%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 2 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure

	Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Covers concentrations up to	25%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Prolonged or repeated exposure increases the risk Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC10 - Roller application or brushing
Covers concentrations up to	25%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 1 hour
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent	Supervision in place to check that the RMMs in place are being used correctly and OCs

/limit releases, dispersion and exposure	followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC13 - Treatment of articles by dipping and pouring
Covers concentrations up to	25%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Section 3 - Exposure estimation

Environmental release category(ies) - ERC2 - Formulation of preparations (mixtures) **- ERC6b - Industrial use of reactive processing aids**

Predicted No Effect Concentration (PNEC)

Freshwater sediment	0.73 mg/kg w.w.
Marine sediment	0.073 mg/kg w.w.
Soil	0.03 mg/kg w.w.

Calculation method

Used EUSES model

Remarks

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	3.6 mg/kg bw/d
Worker - inhalative, long-term - systemic	25.6 mg/m ³
Consumer - oral, long-term - systemic	0.26 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.2 mg/kg bw/d
Consumer - inhalative, long-term - systemic	6.25 mg/m ³

Calculation method
Remarks

ECETOC TRA v2.0 Worker; modified version
Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Process category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio (RCR)
PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)	Worker - dermal, long-term - systemic	0.034 mg/kg bw/d	0.09
PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)	Worker - inhalative, long-term - systemic	12 mg/m ³	0.47
PROC7 - Industrial spraying	Worker - dermal, long-term - systemic	0.011 mg/kg bw/d	0.028
PROC7 - Industrial spraying	Worker - inhalative, long-term - systemic	6 mg/m ³	0.23
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - dermal, long-term - systemic	0.017 mg/kg bw/d	0.045
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - inhalative, long-term - systemic	3 mg/m ³	0.12
PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	Worker - dermal, long-term - systemic	0.01 mg/kg bw/d	0.027
PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	Worker - inhalative, long-term - systemic	7.2 mg/m ³	0.28
PROC10 - Roller application or brushing	Worker - dermal, long-term - systemic	0.14 mg/kg bw/d	0.36
PROC10 - Roller application or brushing	Worker - inhalative, long-term - systemic	2.4 mg/m ³	0.093
PROC13 - Treatment of articles by dipping and pouring	Worker - dermal, long-term - systemic	0.034 mg/kg bw/d	0.09
PROC13 - Treatment of articles by dipping and pouring	Worker - inhalative, long-term - systemic	12 mg/m ³	0.47

Remarks

Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Section 4 - Guidance to check compliance with the exposure scenario

ECHA guidance for downstream users. Further information on the assumptions contained in this exposure scenario can be found at: http://guidance.echa.europa.eu/guidance_en.htm.

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name	XIAMETER OFS-6070 Silane
Chemical name	Methyltrimethoxysilane
Pure substance/mixture	Substance
REACH registration number	01-2119517436-40-XXXX
CAS No	1185-55-3
EC No (EU Index No)	214-685-0
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford GBR
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306
E-mail address	SDS.EMEA@univarsolutions.com

Section 1 - Title

Title	Textile dyes and impregnating products
Type	Worker
Main user group	Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies)	ERC2 - Formulation of preparations (mixtures) ERC6b - Industrial use of reactive processing aids ERC8a - Wide dispersive indoor use of processing aids in open systems ERC8b - Wide dispersive indoor use of reactive substances in open systems
Process category(ies)	PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC7 - Industrial spraying PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10 - Roller application or brushing PROC13 - Treatment of articles by dipping and pouring
Product category(ies)	PC34 - Textile dyes, finishing and impregnating products
Product Name	XIAMETER OFS-6070 Silane
Sector(s) of use	SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites SU5 - Manufacture of textiles, leather, fur SU10 - Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC2 - Formulation of preparations (mixtures)
 - ERC6b - Industrial use of reactive processing aids
 - ERC8a - Wide dispersive indoor use of processing aids in open systems
 - ERC8b - Wide dispersive indoor use of reactive substances in open systems

Covers concentrations up to 100%

Conditions and measures related to external treatment of waste for disposal

Disposal	Dispose of waste product or used containers according to local regulations
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Control of worker exposure

Process category(ies)	PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)
Covers concentrations up to	100%
Physical form of product	Liquid

Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC7 - Industrial spraying
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 1 hour
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 1 hour
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to	Wear suitable face shield

personal protection, hygiene and health evaluation	Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out operation for more than 1 hour
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Process category(ies)	PROC10 - Roller application or brushing
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 15 minutes
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor

Assumes process temperature up to	20 C
Process category(ies)	PROC13 - Treatment of articles by dipping and pouring
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 1 uses per day
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Avoid accumulating electrostatic charge Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure Ensure procedures and training for emergency decontamination and disposal are in place
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable face shield Wear suitable gloves (tested to EN 374), coverall and eye protection Chemical resistant apron Wear a respirator conforming to EN 140 with Type A filter or better Provide a basic standard of general ventilation (1 to 3 air changes per hour)
Organisational measures to prevent /limit releases, dispersion and exposure	Supervision in place to check that the RMMs in place are being used correctly and OCs followed Ensure operatives are trained to minimise exposures Locate bulk storage outdoors Ensure containment of the emission source
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C

Section 3 - Exposure estimation

Environmental release category(ies) - ERC2 - Formulation of preparations (mixtures)

- ERC6b - Industrial use of reactive processing aids

- ERC8a - Wide dispersive indoor use of processing aids in open systems

- ERC8b - Wide dispersive indoor use of reactive substances in open systems

Predicted No Effect Concentration (PNEC)

Freshwater sediment	0.73 mg/kg w.w.
Marine sediment	0.073 mg/kg w.w.
Soil	0.03 mg/kg w.w.

Calculation method

Used EUSES model

Remarks

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	3.6 mg/kg bw/d
Worker - inhalative, long-term - systemic	25.6 mg/m ³
Consumer - oral, long-term - systemic	0.26 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.2 mg/kg bw/d
Consumer - inhalative, long-term - systemic	6.25 mg/m ³

Calculation method

ECETOC TRA v2.0 Worker; modified version

Remarks

Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Process category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio
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			(RCR)
PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)	Worker - dermal, long-term - systemic	0.082 mg/kg bw/d	0.22
PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)	Worker - inhalative, long-term - systemic	12 mg/m ³	0.47
PROC7 - Industrial spraying	Worker - dermal, long-term - systemic	0.043 mg/kg bw/d	0.11
PROC7 - Industrial spraying	Worker - inhalative, long-term - systemic	9.9 mg/m ³	0.39
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - dermal, long-term - systemic	0.014 mg/kg bw/d	0.036
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - inhalative, long-term - systemic	0.99 mg/m ³	0.039
PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	Worker - dermal, long-term - systemic	0.014 mg/kg bw/d	0.036
PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	Worker - inhalative, long-term - systemic	4 mg/m ³	0.16
PROC10 - Roller application or brushing	Worker - dermal, long-term - systemic	0.27 mg/kg bw/d	0.72
PROC10 - Roller application or brushing	Worker - inhalative, long-term - systemic	2 mg/m ³	0.078
PROC13 - Treatment of articles by dipping and pouring	Worker - dermal, long-term - systemic	0.082 mg/kg bw/d	0.22
PROC13 - Treatment of articles by dipping and pouring	Worker - inhalative, long-term - systemic	12 mg/m ³	0.47

Remarks Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Section 4 - Guidance to check compliance with the exposure scenario

ECHA guidance for downstream users. Further information on the assumptions contained in this exposure scenario can be found at: http://guidance.echa.europa.eu/guidance_en.htm.

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name	XIAMETER OFS-6070 Silane
Chemical name	Methyltrimethoxysilane
Pure substance/mixture	Substance
REACH registration number	01-2119517436-40-XXXX
CAS No	1185-55-3
EC No (EU Index No)	214-685-0
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford GBR
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306
E-mail address	SDS.EMEA@univarsolutions.com

Section 1 - Title

Title	Coatings
Type	Consumer
Main user group	Consumer uses: Private households (= general public = consumers)
Environmental release category(ies)	ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix
Product category(ies)	PC9a - Coatings and paints, thinners, paint removers
Product Name	XIAMETER OFS-6070 Silane
Sector(s) of use	SU21 - Consumer uses

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix
- ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix

Covers concentrations up to 17 ppm
Other operational conditions of use affecting environmental exposure

Emission days	365
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Environmental factors not influenced by risk management

Receiving water dilution (fresh or marine)	20000 m3/d
Local freshwater dilution factor	10
Local marine water dilution factor	100

Conditions and measures related to external treatment of waste for disposal

Disposal	Dispose of waste product or used containers according to local regulations
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Control of consumer exposure

Product categories [PC]	PC9a - Coatings and paints, thinners, paint removers
Covers concentrations up to	17 ppm
Physical form of product	Liquid
Vapour pressure	3000 Pa
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C
Use in room with a volume of minimum	20 m3

Section 3 - Exposure estimation

Environmental release category(ies) - ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix - ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix

Predicted No Effect Concentration (PNEC)

Freshwater sediment	0.73 mg/kg
Marine sediment	0.073 mg/kg
Soil	0.03 mg/kg

Remarks Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	3.6 mg/kg bw/d
Worker - inhalative, long-term - systemic	25.6 mg/m ³
Consumer - oral, long-term - systemic	0.26 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.2 mg/kg bw/d
Consumer - inhalative, long-term - systemic	6.25 mg/m ³

Remarks Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Calculation method The Consexpo model has been used to estimate consumer exposures unless otherwise indicated

Remarks Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Product category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio (RCR)
PC9a - Coatings and paints, thinners, paint removers	Consumer - dermal, long-term - systemic	< 0.001 mg/kg bw/d	0.001
PC9a - Coatings and paints, thinners, paint removers	Consumer - inhalative, long-term - systemic	3.09 mg/m ³	0.49

Section 4 - Guidance to check compliance with the exposure scenario

ECHA guidance for downstream users. Further information on the assumptions contained in this exposure scenario can be found at: http://guidance.echa.europa.eu/guidance_en.htm.

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name XIAMETER OFS-6070 Silane
Chemical name Methyltrimethoxysilane
Pure substance/mixture Substance
REACH registration number 01-2119517436-40-XXXX
CAS No 1185-55-3
EC No (EU Index No) 214-685-0
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Sealant
Type Consumer
Main user group Consumer uses: Private households (= general public = consumers)
Environmental release category(ies) ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix
Product category(ies) PC1 - Adhesives, sealants
Product Name XIAMETER OFS-6070 Silane
Sector(s) of use SU21 - Consumer uses

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix
 - ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix

Covers concentrations up to 0.6%
Amounts used

Type	Annual amount per site
Value	0.5
Units	t(ons)/year

Other operational conditions of use affecting environmental exposure

Emission days	365
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Environmental factors not influenced by risk management

Receiving water dilution (fresh or marine)	20000 m3/d
Local freshwater dilution factor	10
Local marine water dilution factor	100

Conditions and measures related to external treatment of waste for disposal

Disposal	Dispose of waste product or used containers according to local regulations
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Control of consumer exposure

Product categories [PC]	PC1 - Adhesives, sealants
Covers concentrations up to	0.6%
Physical form of product	Liquid

Vapour pressure	3000 Pa
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C
Use in room with a volume of minimum	10 m3

Section 3 - Exposure estimation

**Environmental release category(ies) - ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix
- ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix**

**Predicted No Effect Concentration
(PNEC)**

Freshwater sediment	0.73 mg/kg
Marine sediment	0.073 mg/kg
Soil	0.03 mg/kg

Remarks Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	3.6 mg/kg bw/d
Worker - inhalative, long-term - systemic	25.6 mg/m ³
Consumer - oral, long-term - systemic	0.26 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.2 mg/kg bw/d
Consumer - inhalative, long-term - systemic	6.25 mg/m ³

Remarks Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Calculation method The Consexpo model has been used to estimate consumer exposures unless otherwise indicated

Remarks Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Product category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio (RCR)
PC1 - Adhesives, sealants	Consumer - inhalative, short-term - systemic	0.776 mg/m ³	0.12
PC1 - Adhesives, sealants	Consumer - dermal, short-term - local	1.02 mg/m ³	0.34

Section 4 - Guidance to check compliance with the exposure scenario

ECHA guidance for downstream users. Further information on the assumptions contained in this exposure scenario can be found at: http://guidance.echa.europa.eu/guidance_en.htm.

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMS or a site-specific chemical safety assessment is required.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name XIAMETER OFS-6070 Silane
Chemical name Methyltrimethoxysilane
Pure substance/mixture Substance
REACH registration number 01-2119517436-40-XXXX
CAS No 1185-55-3
EC No (EU Index No) 214-685-0
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Assembly structure Sealant
Type Consumer
Main user group Consumer uses: Private households (= general public = consumers)
Environmental release category(ies) ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix

Product category(ies) PC1 - Adhesives, sealants
Product Name XIAMETER OFS-6070 Silane
Sector(s) of use SU21 - Consumer uses

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix
 - ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix

Covers concentrations up to 0.6%
Amounts used

Type	Annual amount per site
Value	0.5
Units	t(ons)/year

Other operational conditions of use affecting environmental exposure

Emission days	365
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Environmental factors not influenced by risk management

Receiving water dilution (fresh or marine)	20000 m3/d
Local freshwater dilution factor	10
Local marine water dilution factor	100

Conditions and measures related to external treatment of waste for disposal

Disposal	Dispose of waste product or used containers according to local regulations
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Control of consumer exposure	
Product categories [PC]	PC1 - Adhesives, sealants
Covers concentrations up to	0.6%
Physical form of product	Liquid
Vapour pressure	3000 Pa
Indoor/Outdoor use	Indoor
Assumes process temperature up to	20 C
Use in room with a volume of minimum	10 m3

Section 3 - Exposure estimation

**Environmental release category(ies) - ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix
- ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix**

Predicted No Effect Concentration (PNEC)

Freshwater sediment	0.73 mg/kg
Marine sediment	0.073 mg/kg
Soil	0.03 mg/kg

Remarks Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	3.6 mg/kg bw/d
Worker - inhalative, long-term - systemic	25.6 mg/m ³
Consumer - oral, long-term - systemic	0.26 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.2 mg/kg bw/d
Consumer - inhalative, long-term - systemic	6.25 mg/m ³

Remarks Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Calculation method The Consexpo model has been used to estimate consumer exposures unless otherwise indicated

Remarks Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Product category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio (RCR)
PC1 - Adhesives, sealants	Consumer - inhalative, short-term - systemic	1.57 mg/m ³	0.25
PC1 - Adhesives, sealants	Consumer - dermal, short-term - local	1.02 mg/m ³	0.34

Section 4 - Guidance to check compliance with the exposure scenario

ECHA guidance for downstream users. Further information on the assumptions contained in this exposure scenario can be found at. http://guidance.echa.europa.eu/guidance_en.htm.

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.