SAFETY DATA SHEET

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

Supercedes date 30-Jun-2020 **Revision date** 16-Oct-2025 **Revision Number** 5

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

1.1. Product identifier

Product Code(s) 51618

Safety data sheet number 51618

Product Name DOWSIL 88 ADDITIVE

Synonyms DOW CORNING 88 ADDITIVE

Pure substance/mixture Mixture

Contains METHANOL

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

Recommended use Industrial use
Professional use
road and construction products.

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)
Serious eye damage/eye irritation	Category 2 - (H319)
Specific target organ toxicity — single exposure	Category 2 - (H371)

2.2. Label elements

Contains METHANOL

Signal word
Danger

Hazard statements
H319 - Causes serious eye irritation
H371 - May cause damage to organs
H225 - Highly flammable liquid and vapour

Precautionary statements
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P260 - Do not breathe dust/fume/gas/mist/vapours/spray
P308 + P311 - IF exposed or concerned: Call a POISON CENTER or doctor
P370 + P378 - In case of fire: Use dry chemical, CO2, water spray or alcohol-resistant foam to extinguish
P403 + P235 - Store in a well-ventilated place. Keep cool
P501 - Dispose of contents/ container to an approved waste disposal plant

Unknown aquatic toxicity Contains 0 % of components with unknown hazards to the aquatic environment.

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

Not applicable

3.2 Mixtures

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	>= 8.0 - <= 11.0 %	214-685-0	-	Flam. Liq. 2 (H225)	-	-	-
TRIETHOXYOCTYL SILANE 2943-75-1	>= 4.4 - <= 5.7 %	220-941-2	-	Skin Irrit. 2 (H315)	-	-	-
METHANOL 67-56-1	>= 1.7 - <= 4.5 %	200-659-6 (603-001-00	-	Flam. Liq. 2 (H225) Acute Tox. 3 (H301)	STOT SE 1 :: C>=10%	-	-

		-X)		Acute Tox. 3 (H311) Acute Tox. 3 (H331) STOT SE 1 (H370)	STOT SE 2 :: 3%<=C<10%		
TITANIUM TETRABUTANOLATE 5593-70-4	>= 1.8 - <= 2.1 %	227-006-8	-	Flam. Liq. 3 (H226) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) STOT SE 3 (H335) STOT SE 3 (H336)	-	-	-
DIMETHOXYDIMETHYLSILANE 1112-39-6	>= 0.08 - <= 0.13 %	214-189-4	-	Flam. Liq. 2 (H225) Repr. 1B (H360F)	-	-	-
OCTAMETHYLCYCLOTETRASILOXANE 556-67-2	<= 0.016 %	209-136-7 (014-018-00 -1)	-	Flam. Liq. 3 (H226) Aquatic Chronic 1 (H410) Repr. 2 (H361f)	-	-	10

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. If breathing is difficult, (trained personnel should) give oxygen. 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. Get medical attention if symptoms occur. Wash contaminated clothing before reuse. Ensure that eyewash stations and safety showers are close to the workstation location.

Ingestion Rinse mouth thoroughly with water. Do NOT induce vomiting. Get medical attention immediately if symptoms occur.

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

Symptoms May cause redness and tearing of the eyes. Burning sensation. Prolonged contact may cause redness and irritation. May cause damage to organs.

Eyes Causes serious eye irritation.

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

Note to doctors Maintain adequate ventilation and oxygenation of the patient. In cases where several ounces (60 - 100 ml) have been ingested, consider the use of ethanol and hemodialysis 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 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. 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. Carbon dioxide (CO2). 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. Highly flammable liquid and vapour. Flash back possible over considerable distance. Exposure to combustion products may be a hazard to health. Flammable concentrations of vapor can accumulate at temperatures above flash point; see Section 9. Flammable mixtures may exist within the vapor space of containers at room temperature. 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. Metal oxides. Formaldehyde. Methanol. Ethanol. BUTANOL.

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.

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. Refer to protective measures listed in Sections 7 and 8.

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.

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. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Suppress (knock down) gases/vapours/mists with a water spray jet. Pick up and transfer to properly labelled containers.

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 open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. 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 isnecessary 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/m³ STEL: 250 ppm STEL: 333 mg/m³ 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/m³ [4] [6]	25.6 mg/m³ [4] [6]
TRIETHOXYOCTYLSILANE 2943-75-1		2.5 mg/kg bw/day [4] [6]	17.6 mg/m³ [4] [6]
METHANOL 67-56-1		20 mg/kg bw/day [4] [6] 20 mg/kg bw/day [4] [7]	130 mg/m³ [4] [6] 130 mg/m³ [4] [7] 130 mg/m³ [5] [6] 130 mg/m³ [5] [7]
TITANIUM TETRABUTANOLATE 5593-70-4			127 mg/m³ [4] [6]
DIMETHOXYDIMETHYLSILANE 1112-39-6		20 mg/kg bw/day [4] [7] 2.8 mg/kg bw/day [4] [6]	19.7 mg/m³ [4] [6] 130 mg/m³ [4] [7] 130 mg/m³ [5] [6] 130 mg/m³ [5] [7]
OCTAMETHYLCYCLOTETRASILOXANE 556-67-2			73 mg/m³ [4] [6] 73 mg/m³ [5] [6]

[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/m³ [4] [6]	7.2 mg/m³ [4] [6]	6.25 mg/m³ [4] [6]
TRIETHOXYOCTYLSILANE 2943-75-1	1.25 mg/kg bw/day [4] [6]	1.25 mg/kg bw/day [4] [6]	4.3 mg/m³ [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/m³ [4] [6] 26 mg/m³ [4] [7] 26 mg/m³ [5] [6] 26 mg/m³ [5] [7]

Chemical name	Oral	Dermal	Inhalation
TITANIUM TETRABUTANOLATE 5593-70-4	3.75 mg/kg bw/day [4] [6]	37.5 mg/kg bw/day [4] [6]	152 mg/m³ [4] [6]
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/m³ [4] [6] 26 mg/m³ [4] [7] 26 mg/m³ [5] [6] 26 mg/m³ [5] [7]
OCTAMETHYLCYCLOTETRASILOXANE 556-67-2	3.7 mg/kg bw/day [4] [6]		13 mg/m³ [4] [6] 13 mg/m³ [5] [6]

[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		
TITANIUM TETRABUTANOLATE 5593-70-4	0.08 mg/L	2.25 mg/L	0.008 mg/L		
DIMETHOXYDIMETHYLSILANE 1112-39-6	0.252 mg/L	1.17 mg/L	0.0252 mg/L	0.117 mg/L	
OCTAMETHYLCYCLOTETRASILOXANE 556-67-2	0.0015 mg/L		0.00015 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	
TRIETHOXYOCTYLSILANE 2943-75-1	19 mg/kg dry weight dw	1.9 mg/kg dry weight dw		3.8 mg/kg dry weight dw	56 mg/kg food
METHANOL 67-56-1	77 mg/kg sediment dw	7.7 mg/kg sediment dw	100 mg/L	100 mg/kg soil dw	
TITANIUM TETRABUTANOLATE 5593-70-4	0.0687 mg/kg sediment dw	0.0069 mg/kg sediment dw	65 mg/L	0.017 mg/kg dry weight 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	
OCTAMETHYLCYCLOTETRASILOXANE 556-67-2	3 mg/kg sediment dw	0.3 mg/kg sediment dw	10 mg/L	0.54 mg/kg soil dw	41 mg/kg food

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.
Recommended filter type: 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 Straw
Odour Strong.
Odour threshold No information available

Property	Values	Remarks • Method
Melting point / freezing point		Not determined.
Initial boiling point and boiling range	> 65 °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	10 °C	Setaflash closed cup.
Autoignition temperature		No information available.
Decomposition temperature		No information available.
pH		Not applicable. Insoluble in water.
pH (as aqueous solution)		No information available.
Kinematic viscosity	35 mm²/s	@ 25 °C.
Dynamic viscosity		No information available.
Water solubility	Insoluble in water	
Solubility(ies)		No information available.
Partition coefficient		Not determined.

Vapour pressure		No information available.
Relative density	0.96	
Bulk density		No information available
Liquid Density	No information available	No information available
Relative vapour density		No information available.
Particle characteristics		Not applicable.
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. 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 None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products Carbon oxides. Silicon oxides. Metal oxides. Formaldehyde. Methanol. Ethanol. BUTANOL.

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 Causes serious eye irritation.

Skin contact Brief contact may cause slight skin irritation with local redness. Prolonged contact may cause moderate skin irritation with local redness.

Ingestion May cause discomfort if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms May cause damage to organs.

Acute toxicity

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

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
TRIETHOXYOCTYLSILANE	5110 mg/kg (Rat)	= 6730 mg/kg (Rabbit) > 8000 mg/kg (Rabbit)	> 22 ppm (Rat) 4 h
METHANOL	300 mg/kg	300 mg/kg	3 mg/L
TITANIUM TETRABUTANOLATE	= 4220 mg/kg (Rat)	5300 mg/kg (Rabbit)	11 mg/l (Rat) 4h
DIMETHOXYDIMETHYLSILANE	> 2000 - 5000 mg/kg (Rat)	-	> 4.7 mg/l (Rat) 4 h
OCTAMETHYLCYCLOTETRASILOXANE	> 4800 mg/kg (Rat)	> 2400 mg/kg (Rat)	= 36 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. Prolonged contact may cause moderate 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.

TRIETHOXYOCTYLSILANE (2943-75-1)

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

METHANOL (67-56-1)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Rabbit	Dermal			Mild skin irritant Prolonged contact may cause slight skin irritation with local redness

TITANIUM TETRABUTANOLATE (5593-70-4)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Causes skin irritation Redness

DIMETHOXYDIMETHYLSILANE (1112-39-6)

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

OCTAMETHYLCYCLOTETRASILOXANE (556-67-2)

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

Serious eye damage/eye irritation Causes serious eye irritation.

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

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

TRIETHOXYOCTYLSILANE (2943-75-1)

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	eye			May cause eye irritation

TITANIUM TETRABUTANOLATE (5593-70-4)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Causes serious eye damage May cause permanent damage if eye is not immediately irrigated. Causes eye burns

DIMETHOXYDIMETHYLSILANE (1112-39-6)

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

OCTAMETHYLCYCLOTETRASILOXANE (556-67-2)

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

Respiratory or skin sensitisation Not a skin sensitiser.

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

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

Method	Species	Exposure route	Results
	Mouse	Dermal	Not a skin sensitiser

TRIETHOXYOCTYLSILANE (2943-75-1)

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

METHANOL (67-56-1)

Method	Species	Exposure route	Results
	Guinea pig	Dermal	No sensitisation responses were observed

TITANIUM TETRABUTANOLATE (5593-70-4)

Method	Species	Exposure route	Results
	Mouse	Dermal	Not a skin sensitiser

DIMETHOXYDIMETHYLSILANE (1112-39-6)

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

OCTAMETHYLCYCLOTETRASILOXANE (556-67-2)

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

TRIETHOXYOCTYLSILANE (2943-75-1)

Method	Species	Results
	in vitro	Negative

METHANOL (67-56-1)

Method	Species	Results
OECD Test No. 471: Bacterial Reverse Mutation Test	in vitro Ames Test Salmonella typhimurium	Negative
OECD Test No. 476: In Vitro Mammalian Cell Gene Mutation Tests using the Hprt and xprt genes	in vitro Chinese hamster fibroblasts	Negative
OECD Test No. 474: Mammalian Erythrocyte Micronucleus Test	in vivo Mouse	Negative

DIMETHOXYDIMETHYLSILANE (1112-39-6)

Method	Species	Results
	in vitro	Negative

OCTAMETHYLCYCLOTETRASILOXANE (556-67-2)

Method	Species	Results
	in vitro	Negative

		Negative Did not show mutagenic effects in animal experiments

Carcinogenicity No information available.

Component Information

METHANOL (67-56-1)

Method	Species	Results
		Did not cause cancer in laboratory animals.

OCTAMETHYLCYCLOTETRASILOXANE (556-67-2)

Method	Species	Results
		Results from a 2 year repeated vapour inhalation exposure study to rats of octamethylcyclotetrasiloxane (D4) indicate effects (benign uterine adenomas) in the uterus of female animals. This finding occurred at the highest exposure dose (700 ppm) only. Studies to date have not demonstrated if these effects occur through pathways that are relevant to humans. Repeated exposure in rats to D4 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.

Reproductive toxicity No information available.

Chemical name	United Kingdom
OCTAMETHYLCYCLOTETRASILOXANE	Repr. 2

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

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

TRIETHOXYOCTYLSILANE (2943-75-1)

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

METHANOL (67-56-1)

Method	Species	Results
		In animal studies, did not interfere with reproduction

DIMETHOXYDIMETHYLSILANE (1112-39-6)

Method	Species	Results
		May damage fertility

OCTAMETHYLCYCLOTETRASILOXANE (556-67-2)

Method	Species	Results
		Suspected of damaging fertility

STOT - single exposure

Based on the classification criteria of the Globally Harmonized System as adopted in the country or region with which this safety data sheet complies, this product has been determined to cause systemic target organ toxicity from acute exposure. (STOT SE). May cause damage to organs. May cause damage to organs. Eyes. Central nervous system.

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

TRIETHOXYOCTYLSILANE (2943-75-1)

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

TITANIUM TETRABUTANOLATE (5593-70-4)

Method	Species	Exposure route	Effective dose	Exposure time	Results
		Inhalation			May cause respiratory irritation
		Inhalation			May cause drowsiness or dizziness

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

OCTAMETHYLCYCLOTETRASILOXANE (556-67-2)

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 No information available.

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

TRIETHOXYOCTYLSILANE (2943-75-1)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					In animals, effects have been reported on the following organs: Urinary tract Findings from a combined repeated-dose toxicity study with reproductive/developmental screening endpoints on n-octyltriethoxysilanehave shown neurological effects in rats at high doses (1000 mg/kg). Paralysis and paresis of the limbs, and demyelination of the brain, spinal cord, sciatic and tibial nerves was noted in some animals.

METHANOL (67-56-1)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Methanol is highly toxic to humans and may cause central nervous system effects, visual disturbances up to blindness, metabolic acidosis, and degenerative damage to other organs including liver, kidney, and heart.

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.

OCTAMETHYLCYCLOTETRASILOXANE (556-67-2)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					In animals, effects have been reported on the following organs: Kidney Liver respiratory tract Female reproductive organs

Aspiration hazard Based on available data the classification criteria are not met.

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.

Unknown aquatic toxicity Contains 0 % of components with unknown hazards to the aquatic environment.

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	

TRIETHOXYOCTYLSILANE (2943-75-1)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
OECD Test No. 203: Fish, Acute Toxicity Test	Oncorhynchus mykiss (rainbow trout)	LC50	> 0.055 mg/L	96 hours	
OECD Test No. 202: Daphnia sp., Acute Immobilisation Test	Daphnia magna	EC50	> 0.049 mg/L	48 hours	
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test	Pseudokirchneriella subcapitata	ErC50	> 0.13 mg/L	72 hours	
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test	Pseudokirchneriella subcapitata	NOEC	> 0.13 mg/L	72 hours	
OECD Test No. 209: Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation)	activated sludge	EC50	> 1000 mg/L	3 hours	
Chronic aquatic toxicity	Pimephales promelas	NOEC	> 0.036 mg/L	32 days	
Chronic aquatic toxicity	Daphnia magna	NOEC	>= 0.199 mg/L	21 days	

METHANOL (67-56-1)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
Acute toxicity	Lepomis macrochirus	LC50	15400 mg/L	96 hours	
Acute toxicity	Daphnia magna	LC50	> 10000 mg/L	48 hours	
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test or Equivalent.	Pseudokirchneriella subcapitata	ErC50	22000 mg/L	96 days	
OECD Test No. 209: Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation)	activated sludge	IC50	> 1000 mg/L	3 hours	
OECD Test No. 222: Earthworm Reproduction Test (Eisenia fetida/Eisenia andrei)	Eisenia fetida		29646 mg/L	63 days	
OECD Test No. 222: Earthworm Reproduction Test (Eisenia fetida/Eisenia andrei)	Eisenia fetida		10000 mg/L	63 days	

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 Immobilisation Test	Daphnia magna	EC50	> 119 mg/L	48 hours	
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	

OCTAMETHYLCYCLOTETRASILOXANE (556-67-2)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
Acute toxicity	Oncorhynchus mykiss (rainbow trout)	LC50	> 0.022 mg/L	96 hours	
Acute toxicity	Cyprinodon variegatus	LC50	> 0.0063 mg/L	14 days	
Acute toxicity	Mysidopsis bahia	EC50	> 0.0091 mg/L	96 hours	
Acute toxicity	Daphnia magna	EC50	> 0.015 mg/L	48 hours	
Acute toxicity	Pseudokirchneriella subcapitata	ErC50	> 0.022 mg/L	96 hours	
Acute toxicity	Pseudokirchneriella subcapitata	EC10	>= 0.022 mg/L	96 hours	
Chronic aquatic toxicity	Oncorhynchus mykiss (rainbow trout)	NOEC	>= 0.0044 mg/L	93 days	
Chronic aquatic toxicity	Daphnia magna	NOEC	0.0079 mg/L	21 days	
					Based on testing of comparable products: The estimated maximum aqueous concentration of Octamethyl Cyclotetrasiloxane (D4) from migration to water from the product as supplied is below the D4 established no-effect threshold (< 0.0079 mg/L) for aquatic organisms.

12.2. Persistence and degradability

Persistence and degradability No information available.

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

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

TRIETHOXYOCTYLSILANE (2943-75-1)

Method	Exposure time	Value	Results
OECD Test No. 301D: Ready Biodegradability: Closed Bottle Test (TG 301 D)	28 days	Biodegradation 31.5%	Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

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

OCTAMETHYLCYCLOTETRASILOXANE (556-67-2)

Method	Exposure time	Value	Results
OECD 310	28 days	Biodegradation 3.7%	Expected to biodegrade very slowly

12.3. Bioaccumulative potential

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient
TRIMETHOXY (METHYL) SILANE	-0.82
TRIETHOXYOCTYLSILANE	6.41
METHANOL	-0.77
TITANIUM TETRABUTANOLATE	0.88
DIMETHOXYDIMETHYLSILANE	2
OCTAMETHYLCYCLOTETRASILOXANE	6.49

12.4. Mobility in soil

Mobility in soil Insoluble.

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
TRIETHOXYOCTYLSILANE	The substance is not PBT / vPvB
METHANOL	The substance is not PBT / vPvB
TITANIUM TETRABUTANOLATE	The substance is not PBT / vPvB
DIMETHOXYDIMETHYLSILANE	The substance is not PBT / vPvB
OCTAMETHYLCYCLOTETRASILOXANE	PBT substance vPvB substance

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products	Should not be released into the environment. Dispose of in accordance with local 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. (TRIMETHOXY (METHYL) SILANE)
14.3 Transport hazard class(es)	3
14.4 Packing group	II
14.5 Environmental hazards	No
14.6 Special precautions for user	
Special Provisions	A3
ERG Code	3H

IMDG

14.1 UN number or ID number	UN1993
14.2 UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (TRIMETHOXY (METHYL) SILANE)
14.3 Transport hazard class(es)	3
14.4 Packing group	II
14.5 Environmental hazards	No
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. (TRIMETHOXY (METHYL) SILANE)
14.3 Transport hazard class(es)	3
14.4 Packing group	II
14.5 Environmental hazards	No
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. (TRIMETHOXY (METHYL) SILANE)
14.3 Transport hazard class(es)	3
14.4 Packing group	II
14.5 Environmental hazards	No
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. 69. 75

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
METHANOL - 67-56-1	69, 75.	-
OCTAMETHYLCYCLOTETRASILOXANE - 556-67-2	Use restricted. See item 70. 75	-

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/NDSL	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/NDSL - 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 No Chemical Safety Assessment has been carried out for this substance/mixture

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
H226 - Flammable liquid and vapour
H301 - Toxic if swallowed
H311 - Toxic in contact with skin
H315 - Causes skin irritation
H318 - Causes serious eye damage
H331 - Toxic if inhaled
H335 - May cause respiratory irritation
H336 - May cause drowsiness or dizziness
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		

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Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
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
Reproductive toxicity	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
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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