

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

Supersedes date 14-Nov-2023

Revision date 22-Feb-2024

Revision Number 12

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

1.1. Product identifier

Product Code(s) 11286
Safety data sheet number 11286
Product Name DOWSIL Z 6689 WATER REPELLENT
Synonyms DOW CORNING Z-6689 WATER REPELLENT
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

Causes mild skin irritation. 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-X)	-	Acute Tox. 3 (H311) STOT SE 1 (H370) Acute Tox. 3 (H301)	STOT SE 1 :: C>=10% STOT SE 2 ::	-	-

				Flam. Liq. 2 (H225) Acute Tox. 3 (H331)	3%≤C<10%		
TITANIUM TETRABUTANOLATE 5593-70-4	≥ 1.8 - ≤ 2.1 %	227-006-8	-	Flam. Liq. 3 (H226) STOT SE 3 (H335) (H336) Skin Irrit. 2 (H315) Eye Dam. 1 (H318)	-	-	-
DIMETHOXYDIMETHYLSILANE 1112-39-6	≥ 0.08 - ≤ 0.13 %	214-189-4	-	Repr. 2 (H361) Flam. Liq. 2 (H225)	-	-	-
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	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. Get medical attention immediately 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. Ensure that eyewash stations and safety showers are close to the workstation location. 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. Continue to rinse for at least 15 minutes and seek medical attention.
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 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 Dry chemical. Carbon dioxide (CO₂). Water spray. Alcohol resistant foam.

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. 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. 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. Ground and bond container and receiving equipment. Do not allow run-off from fire-fighting to enter drains or water courses. Vapours may form explosive mixtures with air.

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	Take precautionary measures against static discharges. 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. Do not allow run-off from fire-fighting to enter drains or water courses.
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. Remove all sources of ignition. Take precautionary measures against static discharges. 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. Ground and bond container and receiving equipment. Product is a static accumulator.
General hygiene considerations	Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection.

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. Avoid contact with: Strong oxidising agents. Organic peroxide. Flammable solid. Pyrophoric liquids. Pyrophoric solids.
---------------------------	---

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]
TRIETHOXYOCTYLSILANE 2943-75-1		2.5 mg/kg bw/day [4] [6]	17.6 mg/m ³ [4] [6]
TITANIUM TETRABUTANOLATE 5593-70-4			127 mg/m ³ [4] [6]
DIMETHOXYDIMETHYLSILANE 1112-39-6		7.44 mg/kg/day [4] [7] 7.44 mg/kg/day [4] [6]	88.4 mg/m ³ [4] [7] 88.4 mg/m ³ [4] [6]
OCTAMETHYLCYCLOTETRASILOXANE 556-67-2			73 mg/m ³ [4] [6] 73 mg/m ³ [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/m ³ [4] [6]	7.2 mg/m ³ [4] [6]	6.25 mg/m ³ [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/m ³ [4] [6]
TITANIUM TETRABUTANOLATE 5593-70-4	3.75 mg/kg bw/day [4] [6]	37.5 mg/kg bw/day [4] [6]	152 mg/m ³ [4] [6]
DIMETHOXYDIMETHYLSILANE 1112-39-6	5.21 mg/kg bw/day [4] [6]		
OCTAMETHYLCYCLOTETRASILOXANE 556-67-2	3.7 mg/kg bw/day [4] [6]		13 mg/m ³ [4] [6] 13 mg/m ³ [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
---------------	------------	--------------------------------------	--------------	--	-----

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
TITANIUM TETRABUTANOLATE 5593-70-4	0.08 mg/L	2.25 mg/L	0.008 mg/L		
DIMETHOXYDIMETHYLSI LANE 1112-39-6	0.24 mg/l		0.024 mg/l		
OCTAMETHYLCYCLOTE TRASILOXANE 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	
TRIETHOXYOCTYLSILAN E 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
TITANIUM TETRABUTANOLATE 5593-70-4	0.069 mg/kg	0.007 mg/kg	65 mg/L	0.017 mg/kg dry weight dw	
DIMETHOXYDIMETHYLSI LANE 1112-39-6	0.22 mg/kg	0.022 mg/kg	10 mg/L	0.053 mg/kg	
OCTAMETHYLCYCLOTE TRASILOXANE 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

Ensure adequate ventilation. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Eyeface 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	> 240 minutes
	Wear protective Neoprene™ gloves	> 0.35 mm	> 240 minutes
	Wear protective nitrile rubber gloves	> 0.35 mm	> 240 minutes
	Ethyl vinyl alcohol laminate ("EVAL")	> 0.35 mm	> 240 minutes
	Polyvinyl chloride (PVC)	> 0.35 mm	> 240 minutes
	Rubber (natural, latex)	> 0.35 mm	> 240 minutes

Skin and body protection

Wear appropriate clothing to prevent reasonably probable skin contact.

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

General hygiene considerations Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection.

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		No information available.
Initial boiling point and boiling range	> 65 °C	@ 760 mmHg.
Flammability		Not applicable.
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 mm ² /s	@ 25 °C.
Dynamic viscosity		No information available.
Water solubility	Insoluble in water	
Solubility(ies)		No information available.
Partition coefficient		No information available.
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. Heat, flames and sparks. Take precautionary measures against static discharges.

10.5. Incompatible materials

Incompatible materials Strong oxidising agents.

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 May cause slight irritation. Redness.

Ingestion Gastrointestinal discomfort.

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

ATEmix (oral) 2,222.20 mg/kg

ATEmix (dermal) 6,666.70 mg/kg

ATEmix (inhalation-vapour) 66.70 mg/l

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	50-300 mg/kg	1000-2000 mg/kg	10-20 mg/l
TITANIUM TETRABUTANOLATE	= 4220 mg/kg (Rat)	= 5300 mg/kg (Rabbit)	= 11 mg/l (4h)
DIMETHOXYDIMETHYLSILANE	> 2000 - 5000 mg/kg (Rat)	-	> 4.7 mg/l (Rat) 4 h
OCTAMETHYLCYCLOTETRASILOXANE	> 4800 mg/kg (Rat)	> 2400 mg/kg (Rabbit)	= 36 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation May cause slight irritation. Redness.

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

Method	Species	Exposure route	Effective dose	Exposure time	Results
					May cause slight irritation Redness

TRIETHOXYOCTYLSILANE (2943-75-1)

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

METHANOL (67-56-1)

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

TITANIUM TETRABUTANOLATE (5593-70-4)

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

DIMETHOXYDIMETHYLSILANE (1112-39-6)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Non-irritating during normal use

OCTAMETHYLCYCLOTETRASILOXANE (556-67-2)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Non-irritating during normal use

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 temporary eye irritation

TRIETHOXYOCTYLSILANE (2943-75-1)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					May cause slight eye irritation

METHANOL (67-56-1)

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

TITANIUM TETRABUTANOLATE (5593-70-4)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Causes serious eye damage

DIMETHOXYDIMETHYLSILANE (1112-39-6)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Not expected to cause eye irritation

OCTAMETHYLCYCLOTETRASILOXANE (556-67-2)

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

Respiratory or skin sensitisation 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		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
	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

OCTAMETHYLCYCLOTETRAILOXANE (556-67-2)

Method	Species	Results
	in vitro	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.

OCTAMETHYLCYCLOTETRAILOXANE (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.

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
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
	Rat	Negative For Male Reproduction NOAEL 1,600 mg/kg/day
	Mouse	Toxic to development LOAEL 4,000
	Mouse	Toxic to development NOAEL 1.3 mg/l

DIMETHOXYDIMETHYLSILANE (1112-39-6)

Method	Species	Results
		Suspected of damaging fertility or the unborn child

OCTAMETHYLCYCLOTETRASILOXANE (556-67-2)

Method	Species	Results
		Suspected of damaging fertility

STOT - single exposure

May cause damage to organs.

METHANOL (67-56-1)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Human	Inhalation			Causes damage to organs
	Human	Inhalation			May cause drowsiness or dizziness
	Rat	Inhalation		6 hours	Some positive data exist, but the data are not sufficient for classification
	Human	Oral			Causes damage to organs
	Human	Oral			May cause drowsiness or dizziness

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
--	--	--	--	--	--

STOT - repeated exposure No information available.

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

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Not classified

TRIETHOXYOCTYLSILANE (2943-75-1)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Not classified

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	90 days	Not classified

TITANIUM TETRABUTANOLATE (5593-70-4)

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

DIMETHOXYDIMETHYLSILANE (1112-39-6)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Not classified

OCTAMETHYLCYCLOTETRASILOXANE (556-67-2)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Not classified Based on available data, specific target organ toxicity is not expected after single oral, single inhalation, or single dermal exposure.

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
	Algae	EC50	16.9 mg/L	69 hours	
	Crustacea	LC50	15900 mg/L	96 hours	
	Fish	LC50	15400 mg/L	96 hours	
	Algae	ErC50	22000 mg/L	96 hours	
	Other aquatic organisms	LC50	54890 mg/L	96 hours	
	Water flea	LC50	3289 mg/L	48 hours	
	Algae	NOEC	9.96 mg/L	96 hours	
	Fish	NOEC	158000 mg/L	8.33 days	

OECD Test No. 209: Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation)	Water flea activated sludge	NOEC IC50	122 mg/L >1000 mg/L	21 days 3 hours	
	Barley	EC50	15492 mg/kg	14 days	
	Redworm	EC50	26646 mg/kg	63 days	
	Springtail	EC50	5683 mg/kg	28 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
	Oncorhynchus mykiss (rainbow trout)	LC50	> 0.022 mg/L	96 hours	
	Cyprinodon variegatus	LC50	> 0.0063 mg/L	14 days	
	Mysidopsis bahia	EC50	> 0.0091 mg/L	96 hours	
	Daphnia magna	EC50	> 0.015 mg/L	48 hours	
	Pseudokirchneriella subcapitata	ErC50	> 0.022 mg/L	96 hours	
	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%	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	92% Biodegradation	Readily biodegradable
	3 days	91% Biodegradation	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 No information available.

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 contains 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. Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.
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, METHANOL)
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, METHANOL)
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, METHANOL)
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, METHANOL)

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

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

Persistent Organic Pollutants

Not applicable

Export Notification requirements

Not applicable

Dangerous substance category per COMAH Regulations 2015 (as amended)

P5c - FLAMMABLE LIQUIDS

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
KECL	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status

AIIC
NZIoC

Contact supplier for inventory compliance status
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 No information available

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
H361f - Suspected of damaging fertility
H370 - Causes damage to organs
H410 - Very toxic to aquatic life with long lasting effects

Legend

SVHC: Substances of Very High Concern for Authorisation:
PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances
vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances

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 8 13 15**

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)
EPA (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)
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 J Spenceley

Supersedes date 14-Nov-2023

Revision date 22-Feb-2024

**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