

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

Supersedes date 13-Oct-2021

Revision date 02-Dec-2024

Revision Number 2

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

1.1. Product identifier

Product Code(s)	62549
Safety data sheet number	62549
Product Name	XIAMETER OFS 6040 SILANE
Substance Name	[3-(2,3-EPOXYPROPOXY)PROPYL]TRIMETHOXYSILANE
EC Number	219-784-2
CAS No	2530-83-8
Pure substance/mixture	Substance

Contains [3-(2,3-EPOXYPROPOXY)PROPYL]TRIMETHOXYSILANE; TETRAMETHYLORTHOSILICATE; ALLYL 2,3-EPOXYPROPYL ETHER

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

Recommended use	Manufacture of substance Formulation or re-packing. Used for formulation of coatings at downstream industrial sites Sealant Industrial use For further information, see attached Exposure Scenario
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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)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Serious eye damage/eye irritation	Category 1 - (H318)
Chronic aquatic toxicity	Category 3 - (H412)

2.2. Label elements

Contains [3-(2,3-EPOXYPROPOXY)PROPYL]TRIMETHOXYSILANE; TETRAMETHYLORTHOSILICATE; ALLYL 2,3-EPOXYPROPYL ETHER

**Signal word**

Danger

Hazard statements

H318 - Causes serious eye damage

H412 - Harmful to aquatic life with long lasting effects

Precautionary statements

P273 - Avoid release to the environment

P280 - Wear eye protection/ face protection

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor

P501 - Dispose of contents/ container to an approved waste disposal plant

2.3. Other hazards

No information available.

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)
[3-(2,3-EPOXYPROPOXY)PROPYL]TRIMETHOXYSILANE 2530-83-8	>= 98.0 - <= 100.0 %	219-784-2	-	Eye Dam. 1 (H318) Aquatic Chronic 3 (H412) ***	-	-	-
METHANOL 67-56-1	<= 0.5 %	200-659-6 (603-001-00-X)	-	Flam. Liq. 2 (H225) Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) STOT SE 1 (H370)	STOT SE 1 :: C>=10% STOT SE 2 :: 3%<=C<10%	-	-

TETRAMETHYLOR THOSILICATE 681-84-5	<= 0.3 %	211-656-4	-	Flam. Liq. 3 (H226) STOT RE 1 (H372) Skin Irrit. 2 (H315) Acute Tox. 1 (H330) Eye Dam. 1 (H318)	-	-	-
ALLYL 2,3-EPOXYPROPYL ETHER 106-92-3	<= 0.2 %	203-442-4 (603-038-00 -1)	-	Aquatic Chronic 3 (H412) Muta. 2 (H341) Flam. Liq. 3 (H226) Skin Sens. 1 (H317) Repr. 2 (H361f) Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Carc. 2 (H351) STOT SE 3 (H335) Eye Dam. 1 (H318) Acute Tox. 3 (H331)	-	-	-

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

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (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. 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	Remove material from skin immediately. Wash skin with soap and water. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands. Get medical attention if symptoms occur. 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 if symptoms occur.

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

Symptoms	The product contains a sensitising substance which may provoke an allergic reaction among sensitive individuals. May cause an allergic skin reaction.
Eyes	Causes serious eye damage. May cause permanent damage if eye is not immediately irrigated. Causes eye burns.

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

Note to doctors	Chemical eye burns may require extended irrigation. Chemical burns must be treated promptly by a physician. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Dry chemical, CO ₂ , alcohol-resistant foam or water spray.
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. Exposure to combustion products may be a hazard to health.
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. Follow precautions for safe handling described in this safety data sheet.
Other information	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	Prevent further leakage or spillage if safe to do so.
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6.3. Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	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.
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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. Avoid spilling. Avoid release to the environment. Handle in accordance with good industrial hygiene and safety practice. Empty containers retain product residue and can be hazardous.

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 away from the following materials. Strong oxidising agents.

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
[3-(2,3-EPOXYPROPOXY)PROPYL]T RIMETHOXYSILANE 2530-83-8		10 mg/kg bw/day [4] [6]	70.5 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]
TETRAMETHYLORTHOSILICATE 681-84-5		0.3 mg/kg bw/day [4] [6] 0.3 mg/kg bw/day [4] [7]	93 mg/m ³ [5] [6]
ALLYL 2,3-EPOXYPROPYL ETHER 106-92-3		0.19 mg/kg bw/day [4] [6] 127.5 mg/kg bw/day [4] [7]	0.954 mg/m ³ [4] [6] 896 mg/m ³ [4] [7] 8.26 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
[3-(2,3-EPOXYPROPOXY)PROPYL]TRIMETHOXY-SILANE 2530-83-8	5 mg/kg bw/day [4] [6]	5 mg/kg bw/day [4] [6]	17 mg/m ³ [4] [6] 25400 mg/m ³ [4] [7]
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]
ALLYL 2,3-EPOXYPROPYL ETHER 106-92-3	0.095 mg/kg bw/day [4] [6] 0.285 mg/kg bw/day [4] [7]	63.75 mg/kg bw/day [4] [6] 63.75 mg/kg bw/day [4] [7]	0.477 mg/m ³ [4] [6] 448 mg/m ³ [4] [7] 4.13 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
[3-(2,3-EPOXYPROPOXY)PROPYL]TRIMETHOXY-SILANE 2530-83-8	0.45 mg/L	0.45 mg/L	0.045 mg/L		
METHANOL 67-56-1	20.8 mg/L	1540 mg/L	2.08 mg/L		
TETRAMETHYLORTHO-SILICATE 681-84-5	5 mg/L	50 mg/L	0.5 mg/L		
ALLYL 2,3-EPOXYPROPYL ETHER 106-92-3	0.036 mg/L		0.0036 mg/l		

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
[3-(2,3-EPOXYPROPOXY)PROPYL]TRIMETHOXY-SILANE 2530-83-8	1.6 mg/kg sediment dw***	0.16 mg/kg sediment dw	8.2 mg/L	0.063 mg/kg soil dw	
METHANOL 67-56-1	77 mg/kg sediment dw	7.7 mg/kg sediment dw	100 mg/L	100 mg/kg soil dw	
TETRAMETHYLORTHO-SILICATE 681-84-5	4.44 mg/kg	2 mg/kg sediment dw	1 mg/L	0.99 mg/kg	
ALLYL 2,3-EPOXYPROPYL ETHER 106-92-3	0.0422 mg/kg	0.00422 mg/kg	0.15 mg/L	0.005 mg/kg	

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	> 240 minutes
	Rubber (natural, latex)	> 0.35 mm	> 240 minutes
	Wear protective Neoprene™ gloves	> 0.35 mm	> 240 minutes
	Nitrile/butadiene rubber ("nitrile" or "NBR").	> 0.35 mm	> 240 minutes
	Ethyl vinyl alcohol laminate ("EVAL")	> 0.35 mm	> 240 minutes
	Polyvinyl chloride (PVC)	> 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.

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

Physical state Liquid
Appearance Clear liquid
Colour Colourless to pale yellow
Odour Aromatic.
Odour threshold No information available

Property	Values	Remarks • Method
Melting point / freezing point		Not determined.
Initial boiling point and boiling range	> 250 °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	> 94 °C	Setaflash 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	3.09 mm²/s	@ 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	1.07	
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 None.

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.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

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 Causes serious eye damage. May cause permanent damage if eye is not immediately

irrigated. Causes eye burns.

Skin contact

The product contains a sensitising substance which may provoke an allergic reaction among sensitive individuals. May cause an allergic skin reaction. May cause slight skin irritation.

Ingestion

May cause discomfort if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics**Symptoms**

No information available.

Acute toxicity**Numerical measures of toxicity****Oral LD50**

Oral LD50 > 5000 mg/kg

Dermal LD50

Dermal LD50 > 3500 mg/kg

Inhalation LC50

Inhalation LC50 > 5.3 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
[3-(2,3-EPOXYPROPOXY)PROPYL]TRIMETHOXY-SILANE	= 7010 mg/kg (Rat)***	= 4000 mg/kg (Rabbit) par***	> 5.3 mg/L (Rat) 4 h
METHANOL	300 mg/kg***	300 mg/kg***	3 mg/L
TETRAMETHYLORTHO-SILICATE	> 2500 mg/kg (Rat)	-	= 0.392 mg/l (Rat) 4 h
ALLYL 2,3-EPOXYPROPYL ETHER	= 1600 mg/kg (Rat)	= 2550 mg/kg (Rabbit)	6.24 - 9.32 mg/L (Rat) 4h

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

May cause slight irritation. Prolonged contact may cause redness and irritation.

[3-(2,3-EPOXYPROPOXY)PROPYL]TRIMETHOXY-SILANE (2530-83-8)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					May cause slight irritation Prolonged contact may cause redness and irritation

TETRAMETHYLORTHO-SILICATE (681-84-5)

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

ALLYL 2,3-EPOXYPROPYL ETHER (106-92-3)

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

Serious eye damage/eye irritation

Causes serious eye damage. May cause permanent damage if eye is not immediately irrigated. Causes eye burns.

[3-(2,3-EPOXYPROPOXY)PROPYL]TRIMETHOXY-SILANE (2530-83-8)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Rabbit***	eye***			Corrosive***

TETRAMETHYLORTHOSILICATE (681-84-5)

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

ALLYL 2,3-EPOXYPROPYL ETHER (106-92-3)

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

Respiratory or skin sensitisation The product contains a sensitising substance which may provoke an allergic reaction among sensitive individuals. May cause an allergic skin reaction.

[3-(2,3-EPOXYPROPOXY)PROPYL]TRIMETHOXYSILANE (2530-83-8)

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

TETRAMETHYLORTHOSILICATE (681-84-5)

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

ALLYL 2,3-EPOXYPROPYL ETHER (106-92-3)

Method	Species	Exposure route	Results
			May cause an allergic skin reaction

Germ cell mutagenicity No information available.

Component Information

[3-(2,3-EPOXYPROPOXY)PROPYL]TRIMETHOXYSILANE (2530-83-8)

Method	Species	Results
	in vitro***	Some positive data exist, but the data are not sufficient for classification***
	in vivo***	Some positive data exist, but the data are not sufficient for classification***

TETRAMETHYLORTHOSILICATE (681-84-5)

Method	Species	Results
	in vitro	Negative
		Negative Did not show mutagenic effects in animal experiments

ALLYL 2,3-EPOXYPROPYL ETHER (106-92-3)

Method	Species	Results
		Suspected of causing genetic defects

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

Chemical name	United Kingdom
ALLYL 2,3-EPOXYPROPYL ETHER	Muta. 2

Carcinogenicity No information available.

Component Information

[3-(2,3-EPOXYPROPOXY)PROPYL]TRIMETHOXYSILANE (2530-83-8)

Method	Species	Results
		Did not cause cancer in laboratory animals.

ALLYL 2,3-EPOXYPROPYL ETHER (106-92-3)

Method	Species	Results
		Suspected of causing cancer

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	United Kingdom
ALLYL 2,3-EPOXYPROPYL ETHER	Carc. 2

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
ALLYL 2,3-EPOXYPROPYL ETHER	Repr. 2

[3-(2,3-EPOXYPROPOXY)PROPYL]TRIMETHOXYSILANE (2530-83-8)

Method	Species	Results
	Rat***	NOAEL 1000 mg/kg Negative***
	Rat***	NOAEL 1000 mg/kg Negative***
	Rat***	NOAEL 3000 mg/kg Negative***

TETRAMETHYLORTHOSILICATE (681-84-5)

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

ALLYL 2,3-EPOXYPROPYL ETHER (106-92-3)

Method	Species	Results
		Suspected of damaging fertility

STOT - single exposure No information available.

ALLYL 2,3-EPOXYPROPYL ETHER (106-92-3)

Method	Species	Exposure route	Effective dose	Exposure time	Results
		Inhalation			May cause respiratory irritation respiratory tract

STOT - repeated exposure No information available.

Component Information

[3-(2,3-EPOXYPROPOXY)PROPYL]TRIMETHOXYSILANE (2530-83-8)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Rat***	Ingestion***	1000 mg/kg mg/kg bw/d***	28 days***	Not classified***

TETRAMETHYLORTHOSILICATE (681-84-5)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					In animals, effects have been reported on the following organs: Respiratory system

ALLYL 2,3-EPOXYPROPYL ETHER (106-92-3)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					In animals, effects have been reported on the following organs: Nasal tissue.

Aspiration hazard

Not determined.

Other adverse effects

No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity

Harmful to aquatic life with long lasting effects.

[3-(2,3-EPOXYPROPOXY)PROPYL]TRIMETHOXYSILANE (2530-83-8)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
Directive 67/548/EEC, Annex V, C.1.	Cyprinus carpio	LC50	55 mg/L	96 hours	
	Daphnia magna	LC50	324 mg/L	48 hours	
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test or Equivalent.	Algae Pseudokirchneriella subcapitata	ErC50	350 mg/L	96 hours	
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test or Equivalent.	Algae Pseudokirchneriella subcapitata	NOEC	130 mg/L	96 hours	
OECD Test No. 209: Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation)	activated sludge	EC50	> 100 mg/L	3 hours	
Chronic toxicity	Daphnia magna	NOEC	100 mg/L	21 days	

METHANOL (67-56-1)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
	Pimephales promelas***	LC50***	28100 mg/L***	96 hours***	

TETRAMETHYLORTHOSILICATE (681-84-5)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
	Brachydanio rerio	LC50	> 245 mg/L	96 hours	
	Daphnia magna	EC50	> 500 mg/L	48 hours	
	Pseudokirchneriella subcapitata	ErC50	> 100 mg/L	72 hours	

ALLYL 2,3-EPOXYPROPYL ETHER (106-92-3)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
OECD Test No. 203: Fish, Acute Toxicity Test or Equivalent.	Cyprinus carpio	LC50	36 mg/L	96 hours	
OECD Test No. 202: Daphnia sp., Acute Immobilisation Test or Equivalent.	Daphnia magna	EC50	50 mg/L	48 hours	
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test or Equivalent.	Pseudokirchneriella subcapitata	ErC50	> 79 mg/L	72 hours	
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test or Equivalent.	Pseudokirchneriella subcapitata	NOEC	20 mg/L	72 hours	
OECD 301D	activated sludge	EC0	1.5 mg/L	28 days	

12.2. Persistence and degradability

Persistence and degradability Expected to biodegrade very slowly.

[3-(2,3-EPOXYPROPOXY)PROPYL]TRIMETHOXYSILANE (2530-83-8)

Method	Exposure time	Value	Results
EC) No. 440/2008, Annex, C.4-A	28 days	Biodegradation 37 %	Expected to biodegrade very slowly

TETRAMETHYLORTHOSILICATE (681-84-5)

Method	Exposure time	Value	Results
OECD Test No. 301A: Ready Biodegradability: DOC Die-Away Test (TG 301 A) or Equivalent.	28 hours	Biodegradation 98 %	Readily biodegradable

ALLYL 2,3-EPOXYPROPYL ETHER (106-92-3)

Method	Exposure time	Value	Results
OECD Test No. 301D: Ready Biodegradability: Closed Bottle Test (TG 301 D)	28 hours	Biodegradation 5 - 9 %	Expected to biodegrade very slowly

12.3. Bioaccumulative potential**Bioaccumulation****Component Information**

Chemical name	Partition coefficient
[3-(2,3-EPOXYPROPOXY)PROPYL]TRIMETHOXYSILANE	0.5
METHANOL	-0.77
TETRAMETHYLORTHOSILICATE	-0.5

ALLYL 2,3-EPOXYPROPYL ETHER	0.24 - 0.43
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12.4. Mobility in soil

Mobility in soil No information available.

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
[3-(2,3-EPOXYPROPOXY)PROPYL]TRIMETHOXY-SILANE	The substance is not PBT / vPvB
METHANOL	The substance is not PBT / vPvB
TETRAMETHYLORTHO-SILICATE	The substance is not PBT / vPvB
ALLYL 2,3-EPOXYPROPYL ETHER	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 products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information**IATA**

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	No
14.6 Special precautions for user	
Special Provisions	None

IMDG

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	No
14.6 Special precautions for user	
Special Provisions	None
14.7 Maritime transport in bulk according to IMO instruments	No information available

RID

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	No

14.6 Special precautions for user

Special Provisions None

ADR**14.1 UN number or ID number** Not regulated**14.2 UN proper shipping name** Not regulated**14.3 Transport hazard class(es)** Not regulated**14.4 Packing group** Not regulated**14.5 Environmental hazards** No**14.6 Special precautions for user**

Special Provisions None

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. 75

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

Persistent Organic Pollutants

Not applicable

Export Notification requirements

Not applicable

Named dangerous substances per COMAH Regulations 2015 (as amended)

Not applicable

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/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**

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

H318 - Causes serious eye damage

H331 - Toxic if inhaled

H370 - Causes damage to organs

H412 - Harmful to aquatic life with long lasting effects

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA TWA (time-weighted average)

Ceiling Maximum limit value

+ Sensitisers

STEL

*

STEL (Short Term Exposure Limit)

Skin designation

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

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

Supersedes date 13-Oct-2021

Revision date 02-Dec-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

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

Product Name XIAMETER OFS-6040 SILANE
Chemical name GLYCIDOXYPROPYLTRIMETHOXYSILANE
Pure substance/mixture Substance
REACH registration number 01-2119513212-58-XXXX
CAS No 2530-83-8
EC No (EU Index No) 219-784-2
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)
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)
 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 Name XIAMETER OFS-6040 SILANE
Sector(s) of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

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)

Amounts used

Type	Annual amount per site
Value	3600
Units	t(ons)/year
Remarks	Continuous release

Type	Daily amount per site
Value	1028
Units	kg/d
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	1300 m3/d

plant flow	
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 on-site 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

Local freshwater dilution factor	900
Local marine water dilution factor	1000
Remarks	Receiving surface water flow 3100 m3/d

Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	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
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Conditions and measures related to external treatment of waste for disposal

Waste treatment methods	Aerobic biological treatment
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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	1,1 Pa
Temperature associated to vapour pressure	20 C
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	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
Indoor/Outdoor use	Indoor
Assumes process temperature up to	40 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	1,1 Pa
Temperature associated to vapour pressure	20 C
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to	Provide a basic standard of general ventilation (1 to 3 air changes per hour)

control dispersion from source towards the worker	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection
Indoor/Outdoor use	Indoor
Assumes process temperature up to	40 C
Operational conditions	Covers use at ambient temperatures

Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	1,1 Pa
Temperature associated to vapour pressure	20 C
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	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
Indoor/Outdoor use	Indoor
Assumes process temperature up to	40 C
Operational conditions	Covers use at ambient temperatures

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	1,1 Pa
Temperature associated to vapour pressure	20 C
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	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 Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Efficiency of at least 95%
Indoor/Outdoor use	Indoor
Assumes process temperature up to	40 C
Operational conditions	Covers use at ambient temperatures

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	1,1 Pa
Temperature associated to vapour pressure	20 C
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	Provide a basic standard of general ventilation (1 to 3 air changes per hour) Local exhaust ventilation - efficiency of at least 90%
Conditions and measures related to	Use suitable eye protection

personal protection, hygiene and health evaluation	
Indoor/Outdoor use	Indoor
Assumes process temperature up to	40 C
Operational conditions	Covers use at ambient temperatures

Section 3 - Exposure estimation

Environmental release category(ies) - ERC1 - Manufacture of substances
- ERC2 - Formulation of preparations (mixtures)

Predicted No Effect Concentration (PNEC)

Freshwater	0.45 mg/l
Freshwater sediment	1.6 mg/kg d.w.
Marine water	0.045 mg/l
Marine sediment	0.16 mg/kg d.w.
Soil	0.063 mg/kg d.w.
Impact on Sewage Treatment	8.2 mg/l
Intermittent release	0.45 mg/l

Calculation method Used EUSES model

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0.00301 mg/L	< 0.01
Marine water	0.000305 mg/L	< 0.01
Freshwater sediment	0.011 mg/kg w.w.	< 0.01
Marine sediment	0.00111 mg/kg w.w.	< 0.01
Soil	0.00106 mg/kg w.w.	0.017

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	10 mg/kg bw/d
Worker - inhalative, long-term - systemic	70.5 mg/m ³
Consumer - oral, long-term - systemic	5 mg/kg bw/d
Consumer - dermal, long-term - systemic	5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	17 mg/m ³

Calculation method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

Process category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio (RCR)
PROC1 - Use in closed process, no likelihood of exposure	Worker - inhalative, long-term - systemic	0.098 mg/m ³	< 0.01
PROC1 - Use in closed process, no likelihood of exposure	Worker - dermal, long-term - systemic	0.034 mg/kg bw/d	< 0.01
PROC1 - Use in closed process, no likelihood of exposure	Worker - combined, long-term - systemic		< 0.01
PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - inhalative, long-term - systemic	0.098 mg/m ³	< 0.01
PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - dermal, long-term - systemic	0.034 mg/kg bw/d	< 0.01

PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - combined, long-term - systemic		< 0.01
PROC3 - Use in closed batch process (synthesis or formulation)	Worker - inhalative, long-term - systemic	0.098 mg/m ³	< 0.01
PROC3 - Use in closed batch process (synthesis or formulation)	Worker - dermal, long-term - systemic	0.034 mg/kg bw/d	< 0.01
PROC3 - Use in closed batch process (synthesis or formulation)	Worker - combined, long-term - systemic		< 0.01
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - inhalative, long-term - systemic	0.098 mg/m ³	< 0.01
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	< 0.01
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - combined, long-term - systemic		< 0.01
PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	Worker - inhalative, long-term - systemic	0.098 mg/m ³	< 0.01
PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	Worker - dermal, long-term - systemic	0.034 mg/kg bw/d	< 0.01
PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	Worker - combined, long-term - systemic		< 0.01

Section 4 - Guidance to check compliance with the exposure scenario

Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined 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. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>).

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

Product Name XIAMETER OFS-6040 SILANE
Chemical name GLYCIDOXYPROPYLTRIMETHOXYSILANE
Pure substance/mixture Substance
REACH registration number 01-2119513212-58-XXXX
CAS No 2530-83-8
EC No (EU Index No) 219-784-2
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 & (re)packing of substances and mixtures Coatings and paints, thinners, paint removers
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) PROC1 - Use in closed process, no likelihood of exposure
 PROC2 - Use in closed, continuous process with occasional controlled exposure
 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

Product category(ies) PC9a - Coatings and paints, thinners, paint removers
Product Name XIAMETER OFS-6040 SILANE
Sector(s) of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

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

Amounts used

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

Type	Daily amount per site
Value	1000
Units	kg/d
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	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

Local freshwater dilution factor	10
Local marine water dilution factor	100
Remarks	Receiving surface water flow 20000 m3/d

Conditions and measures related to external treatment of waste for disposal

Waste treatment methods	Aerobic biological treatment
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Control of worker exposure	
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Covers concentrations up to	50%
Physical form of product	Liquid
Vapour pressure	1,1 Pa
Temperature associated to vapour pressure	20 C
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Efficiency of at least 30%
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection
Indoor/Outdoor use	Indoor
Assumes process temperature up to	40 C
Operational conditions	Covers use at ambient temperatures

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Covers concentrations up to	50%
Physical form of product	Liquid
Vapour pressure	1,1 Pa
Temperature associated to vapour pressure	20 C
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Efficiency of at least 30% Local exhaust ventilation - efficiency of at least 90%
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Efficiency of at least 90%
Indoor/Outdoor use	Indoor
Assumes process temperature up to	40 C
Operational conditions	Covers use at ambient temperatures

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Covers concentrations up to	50%
Physical form of product	Liquid
Vapour pressure	1,1 Pa

Temperature associated to vapour pressure	20 C
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Efficiency of at least 30% Local exhaust ventilation - efficiency of at least 90%
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Efficiency of at least 90%
Indoor/Outdoor use	Indoor
Assumes process temperature up to	40 C
Operational conditions	Covers use at ambient temperatures

Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Covers concentrations up to	50%
Physical form of product	Liquid
Vapour pressure	1,1 Pa
Temperature associated to vapour pressure	20 C
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Efficiency of at least 30% Local exhaust ventilation - efficiency of at least 90%
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Efficiency of at least 90%
Indoor/Outdoor use	Indoor
Assumes process temperature up to	40 C
Operational conditions	Covers use at ambient temperatures

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	50%
Physical form of product	Liquid
Vapour pressure	1,1 Pa
Temperature associated to vapour pressure	20 C
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Efficiency of at least 30% Local exhaust ventilation - efficiency of at least 90%
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Efficiency of at least 90%
Indoor/Outdoor use	Indoor
Assumes process temperature up to	40 C
Operational conditions	Covers use at ambient temperatures

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	1,1 Pa
Temperature associated to vapour pressure	20 C

Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Efficiency of at least 30% Local exhaust ventilation - efficiency of at least 90%
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Efficiency of at least 90%
Indoor/Outdoor use	Indoor
Assumes process temperature up to	40 C
Operational conditions	Covers use at ambient temperatures

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Covers concentrations up to	50%
Physical form of product	Liquid
Vapour pressure	1,1 Pa
Temperature associated to vapour pressure	20 C
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Efficiency of at least 30% Local exhaust ventilation - efficiency of at least 90%
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Efficiency of at least 90%
Indoor/Outdoor use	Indoor
Assumes process temperature up to	40 C
Operational conditions	Covers use at ambient temperatures

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Covers concentrations up to	50%
Physical form of product	Liquid
Vapour pressure	1,1 Pa
Temperature associated to vapour pressure	20 C
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Efficiency of at least 30% Local exhaust ventilation - efficiency of at least 90%
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Efficiency of at least 90%
Indoor/Outdoor use	Indoor
Assumes process temperature up to	40 C
Operational conditions	Covers use at ambient temperatures

Section 3 - Exposure estimation

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

Predicted No Effect Concentration

(PNEC)

Freshwater	0.45 mg/l
Freshwater sediment	1.6 mg/kg d.w.
Marine water	0.045 mg/l
Marine sediment	0.16 mg/kg d.w.
Soil	0.063 mg/kg d.w.
Impact on Sewage Treatment	8.2 mg/l
Intermittent release	0.45 mg/l

Calculation method

Used EUSES model

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0.126 mg/L	0.281
Marine water	0.013 mg/L	0.281
Freshwater sediment	0.461 mg/kg w.w.	0.288
Marine sediment	0.046 mg/kg w.w.	0.288
Soil	0.00587 mg/kg w.w.	0.093

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	10 mg/kg bw/d
Worker - inhalative, long-term - systemic	70.5 mg/m ³
Consumer - oral, long-term - systemic	5 mg/kg bw/d
Consumer - dermal, long-term - systemic	5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	17 mg/m ³

Calculation method

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

Process category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio (RCR)
PROC1 - Use in closed process, no likelihood of exposure	Worker - inhalative, long-term - systemic	0.069 mg/m ³	< 0.01
PROC1 - Use in closed process, no likelihood of exposure	Worker - dermal, long-term - systemic	0.034 mg/kg bw/d	< 0.01
PROC1 - Use in closed process, no likelihood of exposure	Worker - combined, long-term - systemic		< 0.01
PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - inhalative, long-term - systemic	0.069 mg/m ³	< 0.01
PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - dermal, long-term - systemic	0.034 mg/kg bw/d	< 0.01
PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - combined, long-term - systemic		< 0.01
PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - inhalative, long-term - systemic	0.069 mg/m ³	< 0.01
PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - dermal, long-term - systemic	0.034 mg/kg bw/d	< 0.01
PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - combined, long-term - systemic		< 0.01
PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises	Worker - inhalative, long-term - systemic	0.069 mg/m ³	< 0.01

PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises	Worker - dermal, long-term - systemic	0.034 mg/kg bw/d	< 0.01
PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises	Worker - combined, long-term - systemic		< 0.01
PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)	Worker - inhalative, long-term - systemic	0.069 mg/m ³	< 0.01
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	< 0.01
PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)	Worker - combined, long-term - systemic		< 0.01
PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities	Worker - inhalative, long-term - systemic	0.069 mg/m ³	< 0.01
PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities	Worker - dermal, long-term - systemic	0.034 mg/kg bw/d	< 0.01
PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities	Worker - combined, long-term - systemic		< 0.01
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - inhalative, long-term - systemic	0.069 mg/m ³	< 0.01
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	< 0.01
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - combined, long-term - systemic		< 0.01
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - inhalative, long-term - systemic	0.069 mg/m ³	< 0.01
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	< 0.01
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - combined, long-term - systemic		< 0.01

Section 4 - Guidance to check compliance with the exposure scenario

Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined 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. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>).

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

Product Name XIAMETER OFS-6040 SILANE
Chemical name GLYCIDOXYPROPYLTRIMETHOXYSILANE
Pure substance/mixture Substance
REACH registration number 01-2119513212-58-XXXX
CAS No 2530-83-8
EC No (EU Index No) 219-784-2
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 & (re)packing of substances and mixtures Adhesives, sealants
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) PROC2 - Use in closed, continuous process with occasional controlled exposure
 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-6040 SILANE
Sector(s) of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

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

Amounts used

Type	Annual amount per site
Value	120
Units	t(ons)/year
Remarks	Continuous release

Type	Daily amount per site
Value	600
Units	kg/d
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	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

Local freshwater dilution factor	10
Local marine water dilution factor	100
Remarks	Receiving surface water flow 20000 m3/d

Conditions and measures related to external treatment of waste for disposal

Waste treatment methods	Aerobic biological treatment
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Control of worker exposure	
Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Covers concentrations up to	5%
Physical form of product	Liquid
Vapour pressure	1,1 Pa
Temperature associated to vapour pressure	20 C
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Efficiency of at least 30%
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Efficiency of at least 90%
Indoor/Outdoor use	Indoor
Assumes process temperature up to	40 C
Operational conditions	Covers use at ambient temperatures

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Covers concentrations up to	5%
Physical form of product	Liquid
Vapour pressure	1,1 Pa
Temperature associated to vapour pressure	20 C
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Efficiency of at least 30%
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection
Indoor/Outdoor use	Indoor
Assumes process temperature up to	40 C
Operational conditions	Covers use at ambient temperatures

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Covers concentrations up to	5%
Physical form of product	Liquid
Vapour pressure	1,1 Pa

Temperature associated to vapour pressure	20 C
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Efficiency of at least 30%
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection
Indoor/Outdoor use	Indoor
Assumes process temperature up to	40 C
Operational conditions	Covers use at ambient temperatures

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	1,1 Pa
Temperature associated to vapour pressure	20 C
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).
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Efficiency of at least 30%
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection
Indoor/Outdoor use	Indoor
Assumes process temperature up to	40 C
Operational conditions	Covers use at ambient temperatures

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	1,1 Pa
Temperature associated to vapour pressure	20 C
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).
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Efficiency of at least 30%
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Efficiency of at least 90%
Indoor/Outdoor use	Indoor
Assumes process temperature up to	40 C
Operational conditions	Covers use at ambient temperatures

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	1,1 Pa
Temperature associated to vapour pressure	20 C
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).
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Efficiency of at least 30%
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Efficiency of at least 90%
Indoor/Outdoor use	Indoor
Assumes process temperature up to	40 C
Operational conditions	Covers use at ambient temperatures

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	1,1 Pa
Temperature associated to vapour pressure	20 C
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Efficiency of at least 30% Local exhaust ventilation - efficiency of at least 90%
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Efficiency of at least 90%
Indoor/Outdoor use	Indoor
Assumes process temperature up to	40 C
Operational conditions	Covers use at ambient temperatures

Section 3 - Exposure estimation

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

Predicted No Effect Concentration (PNEC)

Freshwater	0.45 mg/l
Freshwater sediment	1.6 mg/kg d.w.
Marine water	0.045 mg/l
Marine sediment	0.16 mg/kg d.w.
Soil	0.063 mg/kg d.w.
Impact on Sewage Treatment	8.2 mg/l
Intermittent release	0.45 mg/l

Calculation method Used EUSES model

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0.003 mg/L	< 0.01
Marine water	0.000295 mg/L	< 0.01
Freshwater sediment	0.011 mg/kg w.w.	< 0.01
Marine sediment	0.00108 mg/kg w.w.	< 0.01

Soil	0.047 mg/kg w.w.	0.739
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Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	10 mg/kg bw/d
Worker - inhalative, long-term - systemic	70.5 mg/m ³
Consumer - oral, long-term - systemic	5 mg/kg bw/d
Consumer - dermal, long-term - systemic	5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	17 mg/m ³

Calculation method

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

Process category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio (RCR)
PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - inhalative, long-term - systemic	1.379 mg/m ³	0.02
PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - dermal, long-term - systemic	0.027 mg/kg bw/d	< 0.01
PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - combined, long-term - systemic		0.022
PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - inhalative, long-term - systemic	1.379 mg/m ³	0.02
PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - dermal, long-term - systemic	0.027 mg/kg bw/d	< 0.01
PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - combined, long-term - systemic		0.022
PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - inhalative, long-term - systemic	1.379 mg/m ³	0.02
PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - dermal, long-term - systemic	0.027 mg/kg bw/d	< 0.01
PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - combined, long-term - systemic		0.022
PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)	Worker - inhalative, long-term - systemic	1.379 mg/m ³	0.02
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	< 0.01
PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)	Worker - combined, long-term - systemic		0.022
PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non	Worker - inhalative, long-term - systemic	1.379 mg/m ³	0.02

dedicated facilities			
PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities	Worker - dermal, long-term - systemic	0.027 mg/kg bw/d	< 0.01
PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities	Worker - combined, long-term - systemic		0.022
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - inhalative, long-term - systemic	1.379 mg/m ³	0.02
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - dermal, long-term - systemic	0.027 mg/kg bw/d	< 0.01
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - combined, long-term - systemic		0.022
PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	Worker - inhalative, long-term - systemic	1.379 mg/m ³	0.02
PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	Worker - dermal, long-term - systemic	0.027 mg/kg bw/d	< 0.01
PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	Worker - combined, long-term - systemic		0.022

Section 4 - Guidance to check compliance with the exposure scenario

Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined 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. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>).

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

Product Name XIAMETER OFS-6040 SILANE
Chemical name GLYCIDOXYPROPYLTRIMETHOXYSILANE
Pure substance/mixture Substance
REACH registration number 01-2119513212-58-XXXX
CAS No 2530-83-8
EC No (EU Index No) 219-784-2
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 Adhesives, sealants
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
 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
 PROC21 - Low energy manipulation of substances bound in materials and/or articles

Product category(ies) PC1 - Adhesives, sealants
Product Name XIAMETER OFS-6040 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 SU6a - Manufacture of wood and wood 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

Amounts used

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

Type	Daily amount per site
Value	500
Units	kg/d

Remarks	Continuous release
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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
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

Local freshwater dilution factor	10
Local marine water dilution factor	100
Remarks	Receiving surface water flow 20000 m3/d

Conditions and measures related to external treatment of waste for disposal

Waste treatment methods	Aerobic biological treatment
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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	1,1 Pa
Temperature associated to vapour pressure	20 C
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Efficiency of at least 30% Local exhaust ventilation - efficiency of at least 95%
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Efficiency of at least 90%
Indoor/Outdoor use	Indoor
Assumes process temperature up to	40 C
Operational conditions	Covers use at ambient temperatures

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	1,1 Pa
Temperature associated to vapour pressure	20 C
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Efficiency of at least 30%
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Efficiency of at least 90%
Indoor/Outdoor use	Indoor
Assumes process temperature up to	40 C

Operational conditions	Covers use at ambient temperatures
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	1,1 Pa
Temperature associated to vapour pressure	20 C
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).
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Efficiency of at least 30%
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Efficiency of at least 90%
Indoor/Outdoor use	Indoor
Assumes process temperature up to	40 C
Operational conditions	Covers use at ambient temperatures
Process category(ies)	PROC10 - Roller application or brushing
Covers concentrations up to	5%
Physical form of product	Liquid
Vapour pressure	1,1 Pa
Temperature associated to vapour pressure	20 C
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Efficiency of at least 30%
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Efficiency of at least 90%
Indoor/Outdoor use	Indoor
Assumes process temperature up to	40 C
Operational conditions	Covers use at ambient temperatures
Process category(ies)	PROC13 - Treatment of articles by dipping and pouring
Covers concentrations up to	5%
Physical form of product	Liquid
Vapour pressure	1,1 Pa
Temperature associated to vapour pressure	20 C
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Efficiency of at least 30%
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection
Indoor/Outdoor use	Indoor
Assumes process temperature up to	40 C
Operational conditions	Covers use at ambient temperatures
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	1,1 Pa
Temperature associated to vapour pressure	20 C
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Efficiency of at least 30%
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection
Indoor/Outdoor use	Indoor
Assumes process temperature up to	40 C
Operational conditions	Covers use at ambient temperatures

Process category(ies)	PROC21 - Low energy manipulation of substances bound in materials and/or articles
Covers concentrations up to	5%
Physical form of product	Liquid
Vapour pressure	1,1 Pa
Temperature associated to vapour pressure	20 C
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Efficiency of at least 30%
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection
Indoor/Outdoor use	Indoor
Assumes process temperature up to	40 C
Operational conditions	Covers use at ambient temperatures

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	0.45 mg/l
Freshwater sediment	1.6 mg/kg d.w.
Marine water	0.045 mg/l
Marine sediment	0.16 mg/kg d.w.
Soil	0.063 mg/kg d.w.
Impact on Sewage Treatment	8.2 mg/l
Intermittent release	0.45 mg/l

Calculation method Used EUSES model

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0.003 mg/L	< 0.01
Marine water	0.000295 mg/L	< 0.01
Freshwater sediment	0.011 mg/kg w.w.	< 0.01
Marine sediment	0.00108 mg/kg w.w.	< 0.01

Soil	0.012 mg/kg w.w.	0.187
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Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	10 mg/kg bw/d
Worker - inhalative, long-term - systemic	70.5 mg/m ³
Consumer - oral, long-term - systemic	5 mg/kg bw/d
Consumer - dermal, long-term - systemic	5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	17 mg/m ³

Calculation method

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

Process category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio (RCR)
PROC7 - Industrial spraying	Worker - inhalative, long-term - systemic	6.893 mg/m ³	0.098
PROC7 - Industrial spraying	Worker - dermal, long-term - systemic	0.857 mg/kg bw/d	0.086
PROC7 - Industrial spraying	Worker - combined, long-term - systemic		0.183
PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities	Worker - inhalative, long-term - systemic	6.893 mg/m ³	0.098
PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities	Worker - dermal, long-term - systemic	0.857 mg/kg bw/d	0.086
PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities	Worker - combined, long-term - systemic		0.183
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - inhalative, long-term - systemic	6.893 mg/m ³	0.098
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - dermal, long-term - systemic	0.857 mg/kg bw/d	0.086
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - combined, long-term - systemic		0.183
PROC10 - Roller application or brushing	Worker - inhalative, long-term - systemic	6.893 mg/m ³	0.098
PROC10 - Roller application or brushing	Worker - dermal, long-term - systemic	0.857 mg/kg bw/d	0.086
PROC10 - Roller application or brushing	Worker - combined, long-term - systemic		0.183
PROC13 - Treatment of articles by dipping and pouring	Worker - inhalative, long-term - systemic	6.893 mg/m ³	0.098
PROC13 - Treatment of articles by dipping and pouring	Worker - dermal, long-term - systemic	0.857 mg/kg bw/d	0.086
PROC13 - Treatment of articles by dipping and pouring	Worker - combined, long-term - systemic		0.183
PROC14 - Production of preparations	Worker - inhalative, long-term	6.893 mg/m ³	0.098

or articles by tableting, compression, extrusion, pelettising	- systemic		
PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising	Worker - dermal, long-term - systemic	0.857 mg/kg bw/d	0.086
PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising	Worker - combined, long-term - systemic		0.183
PROC21 - Low energy manipulation of substances bound in materials and/or articles	Worker - inhalative, long-term - systemic	6.893 mg/m ³	0.098
PROC21 - Low energy manipulation of substances bound in materials and/or articles	Worker - dermal, long-term - systemic	0.857 mg/kg bw/d	0.086
PROC21 - Low energy manipulation of substances bound in materials and/or articles	Worker - combined, long-term - systemic		0.183

Section 4 - Guidance to check compliance with the exposure scenario

Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined 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. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>).