SAFETY DATA SHEET

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

1.1. Product identifier

Trade name or designation of the mixture X-31-1293-W

Registration number -

Synonyms None.

Sales Code GCNSS0

Issue date 25-03-2019

Version number 01

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

Identified uses RTV rubbers
Masking material

Uses advised against Industrial use only.

1.3. Details of the supplier of the safety data sheet

MANUFACTURER

Company name Shin-Etsu Chemical Co., Ltd.

CONTACT Quality Assurance Department（Gunma Complex）

Address 13-1, Isobe 2-chome, Annaka-shi, Gunma 379-0195, JAPAN

TELEPHONE NUMBER +81(0)27-385-2172

FAX NUMBER +81(0)27-385-2753

SUPPLIER

Company name Shin-Etsu Silicones Europe B.V.

CONTACT Quality Assuarance Department

Address Bolderweg 32, 1332AV Almere, the Netherlands

TELEPHONE NUMBER +31 (0)36 54 93 170

FAX NUMBER +31 (0)36 53 26 459

e-mail sds@shinetsusilicones.eu

1.4. Emergency telephone

+31 (0)36 54 93 170
available for office hours CET

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

Environmental hazards

Hazardous to the aquatic environment, long-term aquatic hazard	Category 2	H411 - Toxic to aquatic life with long lasting effects.

*Hazards not stated here are "Not classified", "Not applicable" or "Classification not possible".

Hazard summary May form explosible dust-air mixture if dispersed. Dangerous for the environment if discharged into watercourses.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Tris(isopropenyloxy)phenyl silane ; Alkenoxysilane

Hazard pictograms

Signal word None.

Hazard statements

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

P273 Avoid release to the environment.

Response

P391 Collect spillage.

Storage Not available.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information None.

2.3. Other hazards Not a PBT or vPvB substance or mixture.
May form explosible dust-air mixture if dispersed. This product reacts with water , moisture or humid air to evolve following compounds:
Acetone

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Tris(isopropenyloxy)phenyl silane ; Alkenoxysilane	3 - 10	52301-18-5 411-340-8	-	014-021-00-8	
Classification:	Flam. Liq. 3;H226, Aquatic Acute 1;H400, Aquatic Chronic 1;H410				
Titanium oxide	1 - 3	13463-67-7 236-675-5	-	-	
Classification:	-				
N,N,N',N'-tetramethyl-N''-[3-(trimethoxysilyl)propyl]guanidine ; Organosilane	0,3 - 1	69709-01-9 274-092-8	-	-	
Classification:	Skin Corr. 1B;H314, Eye Dam. 1;H318				

Decomposition

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Acetone		67-64-1 200-662-2	-	606-001-00-8	#

List of abbreviations and symbols that may be used above

#: This substance has been assigned Union workplace exposure limit(s).
M: M-factor
PBT: persistent, bioaccumulative and toxic substance.
vPvB: very persistent and very bioaccumulative substance.
All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition comments The full text for all H-statements is displayed in section 16.

SECTION 4: First aid measures

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.1. Description of first aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Wash skin with soap and water. Get medical attention if irritation develops and persists.

Eye contact Rinse immediately with plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical attention immediately.

4.2. Most important symptoms and effects, both acute and delayed Direct contact with eyes may cause temporary irritation.

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media: None known.

5.2. Special hazards arising from the substance or mixture: Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard. By heating and fire, harmful vapours/gases may be formed.

5.3. Advice for firefighters

Special protective equipment for firefighters: Firefighters must use standard protective equipment including flame retardant coat, helmet, gloves, rubber boots, and self-contained breathing apparatus.

Special fire fighting procedures: Move containers from fire area if you can do so without risk. Water runoff can cause environmental damage.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Ensure adequate ventilation. Wear appropriate personal protective equipment.

For emergency responders: Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions: Prevent further leakage or spillage if safe to do so. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up: Eliminate sources of ignition.

Large Spills: Dam the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills in original containers for re-use.

6.4. Reference to other sections: For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling: Provide adequate ventilation. Use care in handling/storage. Avoid release to the environment. Do not empty into drains. Do not breathe mist or vapour. Avoid prolonged exposure.

7.2. Conditions for safe storage, including any incompatibilities: Keep container tightly closed. Store in a cool, dry place out of direct sunlight. Store away from incompatible materials (see Section 10 of the SDS).
Keep in original container.

7.3. Specific end use(s): Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

Components	Type	Value	Form
Titanium oxide (CAS 13463-67-7)	MAK	5 mg/m3	Respirable dust.
	STEL	10 mg/m3	Respirable dust.

Decomposition	Type	Value
Acetone (CAS 67-64-1)	MAK	1200 mg/m3 500 ppm
	STEL	4800 mg/m3 2000 ppm

Belgium. Exposure Limit Values.

Components	Type	Value
Titanium oxide (CAS 13463-67-7)	TWA	10 mg/m3

Decomposition	Type	Value
Acetone (CAS 67-64-1)	STEL	2420 mg/m3 1000 ppm
	TWA	1210 mg/m3 500 ppm

Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

Components	Type	Value	Form
Titanium oxide (CAS 13463-67-7)	TWA	10 mg/m3	Respirable dust.

Decomposition	Type	Value
Acetone (CAS 67-64-1)	STEL	1400 mg/m3
	TWA	600 mg/m3

Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09

Components	Type	Value	Form
Titanium oxide (CAS 13463-67-7)	STEL	4 mg/m3	Respirable dust.
		10 mg/m3	Total dust.

Decomposition	Type	Value
Acetone (CAS 67-64-1)	MAC	1210 mg/m3 500 ppm
	STEL	3620 mg/m3 1500 ppm

Cyprus. OELs. Control of factory atmosphere and dangerous substances in factories regulation, PI 311/73, as amended.

Components	Type	Value
Titanium oxide (CAS 13463-67-7)	TWA	10 mg/m3

Czech Republic. OELs. Government Decree 361

Components	Type	Value	Form
Titanium oxide (CAS 13463-67-7)	TWA	5 mg/m3	Dust.

Decomposition	Type	Value
Acetone (CAS 67-64-1)	Ceiling	1500 mg/m3
	TWA	800 mg/m3

Denmark. Exposure Limit Values

Components	Type	Value
Titanium oxide (CAS 13463-67-7)	TLV	6 mg/m3

Decomposition	Type	Value
Acetone (CAS 67-64-1)	TLV	600 mg/m3 250 ppm

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)

Components	Type	Value
Titanium oxide (CAS 13463-67-7)	TWA	5 mg/m3

Decomposition	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3 500 ppm

Finland. Workplace Exposure Limits

Components	Type	Value	Form
Titanium oxide (CAS 13463-67-7)	TWA	10 mg/m3	Dust.

Decomposition	Type	Value
Acetone (CAS 67-64-1)	STEL	1500 mg/m3 630 ppm
	TWA	1200 mg/m3 500 ppm

France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984

Components	Type	Value
Titanium oxide (CAS 13463-67-7)	VME	10 mg/m3

Decomposition	Type	Value
Acetone (CAS 67-64-1)	VLE	2420 mg/m3 1000 ppm
	VME	1210 mg/m3 500 ppm

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

Components	Type	Value	Form
Titanium oxide (CAS 13463-67-7)	TWA	4 mg/m3	Inhalable dust.
		0,3 mg/m3	Respirable dust.

Decomposition	Type	Value
Acetone (CAS 67-64-1)	TWA	1200 mg/m3 500 ppm

Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace

Components	Type	Value	Form
Titanium oxide (CAS 13463-67-7)	AGW	10 mg/m3	Inhalable fraction.
		1,25 mg/m3	Respirable fraction.

Decomposition	Type	Value
Acetone (CAS 67-64-1)	AGW	1200 mg/m3 500 ppm

Greece. OELs (Decree No. 90/1999, as amended)

Components	Type	Value	Form
Titanium oxide (CAS 13463-67-7)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Inhalable

Decomposition	Type	Value
Acetone (CAS 67-64-1)	STEL	3560 mg/m3
	TWA	1780 mg/m3

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Components	Type	Value	Form
Titanium oxide (CAS 13463-67-7)	TWA	6 mg/m3	Respirable dust.
		10 mg/m3	Total inhalable dust.

Decomposition	Type	Value
Acetone (CAS 67-64-1)	STEL	2420 mg/m3
	TWA	1210 mg/m3

Iceland. OELs. Regulation 154/1999 on occupational exposure limits

Components	Type	Value
Titanium oxide (CAS 13463-67-7)	TWA	6 mg/m3

Iceland. OELs. Regulation 154/1999 on occupational exposure limits

Decomposition	Type	Value
Acetone (CAS 67-64-1)	TWA	600 mg/m3 250 ppm

Ireland. Occupational Exposure Limits

Components	Type	Value	Form
Titanium oxide (CAS 13463-67-7)	TWA	4 mg/m3	Respirable dust.
		10 mg/m3	Total inhalable dust.

Decomposition	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3 500 ppm

Italy. Occupational Exposure Limits

Components	Type	Value
Titanium oxide (CAS 13463-67-7)	TWA	10 mg/m3

Decomposition	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3 500 ppm

Latvia. OELs. Occupational exposure limit values of chemical substances in work environment

Components	Type	Value
Titanium oxide (CAS 13463-67-7)	TWA	10 mg/m3

Decomposition	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3 500 ppm

Lithuania. OELs. Limit Values for Chemical Substances, General Requirements

Components	Type	Value
Titanium oxide (CAS 13463-67-7)	TWA	5 mg/m3

Decomposition	Type	Value
Acetone (CAS 67-64-1)	STEL	2420 mg/m3 1000 ppm
	TWA	1210 mg/m3 500 ppm

Luxembourg. Binding Occupational exposure limit values (Annex I), Memorial A

Decomposition	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3 500 ppm

Malta. OELs. Occupational Exposure Limit Values (L.N. 227. of Occupational Health and Safety Authority Act (CAP. 424), Schedules I and V)

Decomposition	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3 500 ppm

Netherlands. OELs (binding)

Decomposition	Type	Value
Acetone (CAS 67-64-1)	STEL	2420 mg/m3
	TWA	1210 mg/m3

Norway. Administrative Norms for Contaminants in the Workplace

Components	Type	Value
Titanium oxide (CAS 13463-67-7)	TLV	5 mg/m3

Decomposition	Type	Value
Acetone (CAS 67-64-1)	TLV	295 mg/m3

Norway. Administrative Norms for Contaminants in the Workplace

Decomposition	Type	Value
		125 ppm

Poland. MACs. Regulation regarding maximum permissible concentrations and intensities of harmful factors in the work environment, Annex 1

Components	Type	Value	Form
Titanium oxide (CAS 13463-67-7)	STEL	30 mg/m3	
	TWA	10 mg/m3	Inhalable fraction.

Decomposition	Type	Value
Acetone (CAS 67-64-1)	STEL	1800 mg/m3
	TWA	600 mg/m3

Portugal. OELs. Decree-Law n. 290/2001 (Journal of the Republic - 1 Series A, n.266)

Decomposition	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3
		500 ppm

Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)

Components	Type	Value
Titanium oxide (CAS 13463-67-7)	TWA	10 mg/m3

Decomposition	Type	Value
Acetone (CAS 67-64-1)	STEL	750 ppm
	TWA	500 ppm

Romania. OELs. Protection of workers from exposure to chemical agents at the workplace

Components	Type	Value
Titanium oxide (CAS 13463-67-7)	STEL	15 mg/m3
	TWA	10 mg/m3

Decomposition	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3
		500 ppm

Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents

Components	Type	Value
Titanium oxide (CAS 13463-67-7)	TWA	5 mg/m3

Decomposition	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3
		500 ppm

Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)

Decomposition	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3
		500 ppm

Spain. Occupational Exposure Limits

Components	Type	Value
Titanium oxide (CAS 13463-67-7)	TWA	10 mg/m3

Decomposition	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3
		500 ppm

Sweden. OELs. Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2015:7)

Components	Type	Value	Form
Titanium oxide (CAS 13463-67-7)	TWA	5 mg/m3	Total dust.

Sweden. OELs. Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2015:7)

Decomposition	Type	Value
Acetone (CAS 67-64-1)	STEL	1200 mg/m3 500 ppm
	TWA	600 mg/m3 250 ppm

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Components	Type	Value	Form
Titanium oxide (CAS 13463-67-7)	TWA	3 mg/m3	Respirable dust.

Decomposition	Type	Value
Acetone (CAS 67-64-1)	STEL	2400 mg/m3 1000 ppm
	TWA	1200 mg/m3 500 ppm

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value	Form
Titanium oxide (CAS 13463-67-7)	TWA	4 mg/m3	Respirable.
		10 mg/m3	Inhalable

Decomposition	Type	Value
Acetone (CAS 67-64-1)	STEL	3620 mg/m3 1500 ppm
	TWA	1210 mg/m3 500 ppm

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU

Decomposition	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3 500 ppm

Biological limit values

Croatia. BLV. Dangerous Substance Exposure Limit Values at Workplace, Annexes 4 (as amended)

Decomposition	Value	Determinant	Specimen	Sampling time
Acetone (CAS 67-64-1)	20 mg/g	Acetone	Creatinine in urine	*
	20 mg/l	Acetone	Blood	*
	0,34 mmol/l	Acetone	Blood	*
	38,95 mmol/mol	Acetone	Creatinine in urine	*

* - For sampling details, please see the source document.

France. Biological indicators of exposure (IBE) (National Institute for Research and Security (INRS, ND 2065)

Decomposition	Value	Determinant	Specimen	Sampling time
Acetone (CAS 67-64-1)	100 mg/l	Acétone	Urine	*

* - For sampling details, please see the source document.

Germany. TRGS 903, BAT List (Biological Limit Values)

Decomposition	Value	Determinant	Specimen	Sampling time
Acetone (CAS 67-64-1)	80 mg/l	Aceton	Urine	*

* - For sampling details, please see the source document.

Slovakia. BLVs (Biological Limit Value). Regulation no. 355/2006 concerning protection of workers exposed to chemical agents, Annex 2

Decomposition	Value	Determinant	Specimen	Sampling time
Acetone (CAS 67-64-1)	53,36 mg/g	Acetone	Creatinine in urine	*
	80 mg/l	Acetone	Urine	*

* - For sampling details, please see the source document.

Spain. Biological Limit Values (VLBs), Occupational Exposure Limits for Chemical Agents, Table 4

Decomposition	Value	Determinant	Specimen	Sampling time
Acetone (CAS 67-64-1)	50 mg/l	Acetona	Urine	*

* - For sampling details, please see the source document.

Switzerland. BAT-Werte (Biological Limit Values in the Workplace as per SUVA)

Decomposition	Value	Determinant	Specimen	Sampling time
Acetone (CAS 67-64-1)	80 mg/l	Aceton	Urine	*

* - For sampling details, please see the source document.

Recommended monitoring procedures Not available.

Derived no effect levels (DNELs) Not available.

Predicted no effect concentrations (PNECs) Not available.

8.2. Exposure controls

Appropriate engineering controls Explosion-proof general and local exhaust ventilation. Provide eyewash station.
Pay attention to ventilation such as local exhaust, mechanical and/or door open for at least 24 hours after application.

Individual protection measures, such as personal protective equipment

General information Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection Tightly sealed safety glasses according to EN 166.

Skin protection

- Hand protection Wear protective gloves.

- Other Wear suitable protective clothing.

Respiratory protection Respiratory protection must be worn whenever the WEL levels have been exceeded.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Hygiene measures Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practices.

Environmental exposure controls Contain spills and prevent releases and observe national regulations on emissions. Environmental manager must be informed of all major releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state Solid.

Form Paste.

Colour White.

Odour Acetone odor

Odour threshold Not available.

pH Not measurable (Refer to water solubility)

Melting point/freezing point No data

Initial boiling point and boiling range Not applicable.

Flash point 18 °C (64,4 °F) Closed cup (Does not sustain combustion)

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 2,1 % v/v [Acetone]

Flammability limit - upper (%) 13,0 % v/v [Acetone]

Vapour pressure Negligible (25 °C)

Vapour density Not applicable

Relative density 1,03 (23°C)

Solubility(ies)	
Solubility (water)	Not soluble
Partition coefficient (n-octanol/water)	Not applicable
Auto-ignition temperature	No data
Decomposition temperature	Not available.
Viscosity	Not applicable.
Explosive properties	Not available.
Oxidising properties	Not available.
9.2. Other information	
Molecular weight	Not applicable.

SECTION 10: Stability and reactivity

10.1. Reactivity	No hazardous reaction known under normal conditions of use, storage and transport.
10.2. Chemical stability	Stable at normal conditions.
10.3. Possibility of hazardous reactions	Hazardous polymerisation does not occur.
10.4. Conditions to avoid	None known.
10.5. Incompatible materials	Strong oxidising agents. Water, moisture.
10.6. Hazardous decomposition products	This product reacts with water, moisture or humid air to evolve following compounds: Acetone. Thermal breakdown of this product during fire or very high heat condition may evolve the following hazardous decomposition product: Carbon oxides and traces of incompletely burned carbon compounds. Silicon dioxide. Formaldehyde .

SECTION 11: Toxicological information

General information	Occupational exposure to the substance or mixture may cause adverse effects.
Information on likely routes of exposure	
Inhalation	No adverse effects due to inhalation are expected.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms	Direct contact with eyes may cause temporary irritation.

11.1. Information on toxicological effects

Acute toxicity

Components	Species	Test results
N,N,N',N'-tetramethyl-N''-[3-(trimethoxysilyl)propyl]guanidine ; Organosilane (CAS 69709-01-9)		
Acute		
Oral		
LD50	Rat	3,67 ml/kg
Tris(isopropenyloxy)phenyl silane ; Alkenoxysilane (CAS 52301-18-5)		
Acute		
Oral		
LD50	Rat	> 5000 mg/kg
Subacute		
Inhalation		
NOEL	Rat	0,31 mg/l, 28 days

Decomposition	Species	Test results
Acetone (CAS 67-64-1)		
Acute		
Inhalation		
LC50	Rat	50,1 mg/l, 8 Hours

Decomposition	Species	Test results
Oral		
LD50	Mouse	3000 mg/kg
	Rabbit	5340 mg/kg
	Rat	5800 mg/kg

Skin corrosion/irritation
SKIN-RABBIT : MILD(P.I.I=0.2) [Alkenoxysilane]
Causes visible necrosis of the skin tissue (Rabbit/60 Minutes) [Organosilane]

Serious eye damage/eye irritation
EYE-RABBIT :Minimal irritant [Alkenoxysilane]
Causes serious eye damage. [Organosilane]
Causes serious eye irritation. [Acetone]

Respiratory sensitisation
Not available.

Skin sensitisation
No skin sensitizing(guinea pigs) [Alkenoxysilane] [tris(isopropenyloxy)phenyl silane]

Germ cell mutagenicity
Negative(Bacteria) Negative(Chromosome analysis) [Alkenoxysilane] [tris(isopropenyloxy)phenyl silane]

N,N,N',N'-tetramethyl-N''-[3-(trimethoxysilyl)propyl]guanidine ; Organosilane	OECD 471 Result: Negative with and without metabolic activation. Species: Micro-organisms

Carcinogenicity
The following material is embedded in the product and not available as respirable dusts. When used as intended or as supplied, the product will not pose hazards of the following material.
Titanium oxide.

IARC Monographs. Overall Evaluation of Carcinogenicity

Titanium oxide (CAS 13463-67-7)	2B Possibly carcinogenic to humans.

Reproductive toxicity
Not available.

Specific target organ toxicity - single exposure
May cause damage to the following organs.
Narcotic effects. [Acetone]

Specific target organ toxicity - repeated exposure
Not available.

Aspiration hazard
Not available.

Mixture versus substance information
Not available.

Other information
This product reacts with water , moisture or humid air to evolve following compounds:
Acetone

SECTION 12: Ecological information

12.1. Toxicity
Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
[Alkenoxysilane] [tris(isopropenyloxy)phenyl silane]

Components		Species	Test results
N,N,N',N'-tetramethyl-N''-[3-(trimethoxysilyl)propyl]guanidine ; Organosilane (CAS 69709-01-9)			
Aquatic			
Acute			
Algae	EC50	Pseudokirchneriella subcapitata	> 133 mg/l, 72 hours
	NOEC	Pseudokirchneriella subcapitata	> 133 mg/l, 72 hours
Crustacea	EC50	Daphnia	> 122 mg/l, 48 hours
Titanium oxide (CAS 13463-67-7)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	> 1000 mg/l, 48 hours
Fish	LC50	Mummichog (Fundulus heteroclitus)	> 1000 mg/l, 96 hours
Tris(isopropenyloxy)phenyl silane ; Alkenoxysilane (CAS 52301-18-5)			
Aquatic			
Crustacea	LC50	Daphnia	12,7 mg/l, 48 hr
Fish	LC50	Carp	18 mg/l, 96 hr

Decomposition		Species	Test results
Acetone (CAS 67-64-1)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	10294 - 17704 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours

12.2. Persistence and degradability No data available.

Biodegradability

Percent degradation (Aerobic biodegradation-ready)

N,N,N',N'-tetramethyl-N''-[3-(trimethoxysilyl)propyl]guanidine ; Organosilane	36 % OECD 301F, Not readily biodegradable. Species: Activated sludge Test Duration: 28 days

12.3. Bioaccumulative potential Not available.

Partition coefficient n-octanol/water (log Kow) Not available.

12.4. Mobility in soil Not available.

Mobility in general No data available.

12.5. Results of PBT and vPvB assessment Not available.

12.6. Other adverse effects Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Local disposal regulations). Avoid discharge into water courses or onto the ground.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied.

EU waste code The Waste code should be assigned in discussion between the user, the producer and the waste disposal company. Waste codes should be assigned by the user based on the application for which the product was used.

Disposal methods/information Not hardening substance : Incinerate. Incinerator should be appropriately equipped for silica and other fine powder which the product will generate in incineration. Workers should wear appropriate personal protective equipment(s) such as respirator.
Hardening substance : Bury or incinerate. Incinerator should be appropriately equipped for silica and other fine powder which the product will generate in incineration. Workers should wear appropriate personal protective equipment(s) such as respirator.
Contract with a disposal operator licensed by the Law on Disposal and Cleaning. Do not allow this material to drain into sewers/water supplies. Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

ADR

14.1. UN number UN3077

14.2. UN proper shipping name Environmentally hazardous substance, solid, n.o.s. (Tris(isopropenyloxy)phenyl silane ; Alkenoxysilane)

14.3. Transport hazard class(es)

Class 9

Subsidiary risk -

Label(s) 9

Hazard No. (ADR) 90

Tunnel restriction code E

14.4. Packing group III

14.5. Environmental hazards Yes

14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

RID

14.1. UN number UN3077

14.2. UN proper shipping name Environmentally hazardous substance, solid, n.o.s. (Tris(isopropenyloxy)phenyl silane ; Alkenoxysilane)

14.3. Transport hazard class(es)

Class	9
Subsidiary risk	-
Label(s)	9
14.4. Packing group	III
14.5. Environmental hazards	Yes
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

ADN

14.1. UN number	UN3077
14.2. UN proper shipping name	Environmentally Hazardous Solid, N.o.s. (Tris(isopropenyloxy)phenyl silane ; Alkenoxysilane)
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
14.4. Packing group	III
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

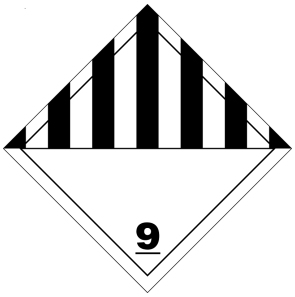
14.1. UN number	UN3077
14.2. UN proper shipping name	Environmentally hazardous substance, solid, n.o.s. (Tris(isopropenyloxy)phenyl silane ; Alkenoxysilane)
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-
14.4. Packing group	III
14.5. Environmental hazards	Yes
ERG Code	9L
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

14.1. UN number	UN3077
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Tris(isopropenyloxy)phenyl silane ; Alkenoxysilane)
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-
14.4. Packing group	III
14.5. Environmental hazards	
Marine pollutant	Yes
EmS	F-A, S-F
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code	This product is not intended to be transported in bulk.

ADN; ADR; IATA; IMDG; RID



Marine pollutant

General information IMDG Regulated Marine Pollutant. Sealed packets and articles containing less than 10 ml of an environmentally hazardous liquid, or containing less than 10 g of an environmentally hazardous solid are not regulated as dangerous goods.

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Tris(isopropenyloxy)phenyl silane ; Alkenoxysilane (CAS 52301-18-5)

Other regulations The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

National regulations	Follow national regulation for work with chemical agents.
15.2. Chemical safety assessment	No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations	Not available.
References	Not available.
Information on evaluation method leading to the classification of mixture	The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.
Full text of any H-statements not written out in full under Sections 2 to 15	H226 Flammable liquid and vapour. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects.
Revision information	Product and Company Identification: Product and Company Identification Composition / Information on Ingredients: Potential Compounds Formed Physical & Chemical Properties: Multiple Properties Toxicological Information: Toxicological Data Ecological Information: Ecotoxicity Transport Information: Material Transportation Information Regulatory Information: Regulatory Information HazReg Data: Pacific Rim GHS: Classification
Training information	Follow training instructions when handling this material.
Disclaimer	This information is offered in good faith as typical values and not as a product specification. No warranty, expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate. This product has been designed, manufactured and developed solely for general industrial use only. This product is not designed for, intended for use as, or suitable for, medical, surgical or other particular purposes. Users have the sole responsibility and obligation to determine the suitability of this product for any application, to make preliminary tests, and to confirm the safety of this product for their use. Users must never use this product for the purpose of implantation into the human body and/or injection into humans.