



Safety Data Sheet according to (EC) No 1907/2006 as amended

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LOCTITE SI 5999 known as 5999 GREY

SDS No. : 152853
V007.0

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

1.1. Product identifier

LOCTITE SI 5999 known as 5999 GREY

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

Intended use:

Silicone sealant

1.3. Details of the supplier of the safety data sheet

Henkel Ltd

Wood Lane End

HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 1442 278000

Fax-no.: +44 1442 278071

ua-productsafety.uk@henkel.com

1.4. Emergency telephone number

24 Hours Emergency Tel: +44 (0)1442 278497

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Serious eye damage Category 1

H318 Causes serious eye damage.

Skin sensitizer Category 1

H317 May cause an allergic skin reaction.

Carcinogenicity Category 1B

H350 May cause cancer.

Chronic hazards to the aquatic environment Category 3

H412 Harmful to aquatic life with long lasting effects.

Specific target organ toxicity - single exposure Category 2

H371 May cause damage to organs.

2.2. Label elements

Label elements (CLP):

Hazard pictogram:**Contains**

Silicon compounds

2-butanone oxime

Butan-2-one O,O',O'',O'''-silanetetrayltetraoxime

Signal word:**Danger****Hazard statement:**

H350 May cause cancer.
 H371 May cause damage to organs.
 H318 Causes serious eye damage.
 H317 May cause an allergic skin reaction.
 H412 Harmful to aquatic life with long lasting effects.

Supplemental information

Restricted to professional users.

**Precautionary statement:
Prevention**

P201 Obtain special instructions before use.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.

**Precautionary statement:
Response**

P308+P313 IF exposed or concerned: Get medical advice/attention.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

2.3. Other hazards

None if used properly.

This mixture contains components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB).

SECTION 3: Composition/information on ingredients**3.2. Mixtures****General chemical description:**

Silicone sealant

Declaration of the ingredients according to CLP (EC) No 1272/2008:

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Silicon compounds		5- < 10 %	Skin Sens. 1 H317 Eye Dam. 1 H318 STOT RE 2 H373
2-butanone oxime 96-29-7	202-496-6 01-2119539477-28	1- < 3 %	Acute Tox. 3 H301 Acute Tox. 4 H312 Skin Irrit. 2 H315 Skin Sens. 1 H317 Eye Dam. 1 H318 STOT SE 3 H336 STOT SE 1 H370 STOT RE 2 H373 Carc. 1B H350
Butan-2-one O,O',O'',O'''- silanetetrayltetraoxime 34206-40-1	251-882-0 01-2119982966-14	0,1- < 1 %	Flam. Sol. 1 H228 Skin Sens. 1 H317 Eye Irrit. 2 H319 STOT RE 2 H373
octamethylcyclotetrasiloxane 556-67-2	209-136-7 01-2119529238-36	0,01- < 0,1 %	Flam. Liq. 3 H226 Repr. 2 H361f Aquatic Chronic 1 H410 ===== EU. REACH Candidate List of Substances of Very High Concern for Authorization (SVHC) M factor (Chron Aquat Tox): 10

For full text of the H - statements and other abbreviations see section 16 "Other information".
Substances without classification may have community workplace exposure limits available.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Move to fresh air. If symptoms persist, seek medical advice.

Skin contact:

Rinse with running water and soap.

Obtain medical attention if irritation persists.

Eye contact:

Rinse immediately with plenty of running water (for 10 minutes), seek medical attention from a specialist.

Ingestion:

Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

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

SKIN: Rash, Urticaria.

After eye contact: Corrosive, may cause permanent damage to eyes (impairment of vision).

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

See section: Description of first aid measures

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media:**

Carbon dioxide, foam, powder

Extinguishing media which must not be used for safety reasons:

High pressure waterjet

5.2. Special hazards arising from the substance or mixture

In the event of a fire, carbon monoxide (CO), carbon dioxide (CO₂) and nitrogen oxides (NO_x) can be released.

Silicon dioxide

Formaldehyde

Silica fume

5.3. Advice for firefighters

Wear self-contained breathing apparatus.

Additional information:

In case of fire, keep containers cool with water spray.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Avoid contact with skin and eyes.

Wear protective equipment.

Ensure adequate ventilation.

6.2. Environmental precautions

Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up

Scrape up as much material as possible.

Sweep up spilled material. Avoid creating dust.

Store in a partly filled, closed container until disposal.

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Avoid skin and eye contact.

See advice in section 8

Hygiene measures:

Good industrial hygiene practices should be observed.

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, well-ventilated place.

Refer to Technical Data Sheet

Never allow product to get in contact with water during storage

7.3. Specific end use(s)

Silicone sealant

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational Exposure Limits**Valid for
Great Britain

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Calcium carbonate 471-34-1 [CALCIUM CARBONATE, INHALABLE DUST]		10	Time Weighted Average (TWA):		EH40 WEL
Calcium carbonate 471-34-1 [CALCIUM CARBONATE, RESPIRABLE DUST]		4	Time Weighted Average (TWA):		EH40 WEL
Calcium carbonate 471-34-1 [LIMESTONE, RESPIRABLE MARBLE, RESPIRABLE]		4	Time Weighted Average (TWA):		EH40 WEL
Calcium carbonate 471-34-1 [LIMESTONE, TOTAL INHALABLE MARBLE, TOTAL INHALABLE]		10	Time Weighted Average (TWA):		EH40 WEL

Occupational Exposure LimitsValid for
Ireland

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Calcium carbonate 471-34-1 [CALCIUM CARBONATE]		4	Time Weighted Average (TWA):		IR_OEL
Calcium carbonate 471-34-1 [CALCIUM CARBONATE]		10	Time Weighted Average (TWA):		IR_OEL
Butanone oxime 96-29-7 [METHYL ETHYL KETOXIME]	3	10	Time Weighted Average (TWA):		IR_OEL
Butanone oxime 96-29-7 [METHYL ETHYL KETOXIME]	10	33	Short Term Exposure Limit (STEL):	15 minutes	IR_OEL

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
Butan-2-one O,O',O'',O'''-silanetetrayltetraoxime 34206-40-1	aqua (freshwater)		0,0171 mg/l				
Butan-2-one O,O',O'',O'''-silanetetrayltetraoxime 34206-40-1	aqua (marine water)		0,00171 mg/l				
Butan-2-one O,O',O'',O'''-silanetetrayltetraoxime 34206-40-1	sewage treatment plant (STP)		4,825 mg/l				
Butan-2-one O,O',O'',O'''-silanetetrayltetraoxime 34206-40-1	sediment (freshwater)				9835,3 mg/kg		
Butan-2-one O,O',O'',O'''-silanetetrayltetraoxime 34206-40-1	sediment (marine water)				983,5 mg/kg		
Butan-2-one O,O',O'',O'''-silanetetrayltetraoxime 34206-40-1	Soil				1157,9 mg/kg		
Butan-2-one O,O',O'',O'''-silanetetrayltetraoxime 34206-40-1	oral				2,97 mg/kg		
Octamethylcyclotetrasiloxane 556-67-2	aqua (freshwater)		0,0015 mg/l				
Octamethylcyclotetrasiloxane 556-67-2	aqua (marine water)		0,00015 mg/l				
Octamethylcyclotetrasiloxane 556-67-2	sewage treatment plant (STP)		10 mg/l				
Octamethylcyclotetrasiloxane 556-67-2	sediment (freshwater)				3 mg/kg		
Octamethylcyclotetrasiloxane 556-67-2	sediment (marine water)				0,3 mg/kg		
Octamethylcyclotetrasiloxane 556-67-2	oral				41 mg/kg		
Octamethylcyclotetrasiloxane 556-67-2	Soil				0,54 mg/kg		

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Butan-2-one O,O',O'',O'''-silanetetrayltetraoxime 34206-40-1	Workers	inhalation	Long term exposure - systemic effects		0,942 mg/m3	
Butan-2-one O,O',O'',O'''-silanetetrayltetraoxime 34206-40-1	Workers	dermal	Long term exposure - systemic effects		0,134 mg/kg	
Butan-2-one O,O',O'',O'''-silanetetrayltetraoxime 34206-40-1	General population	inhalation	Long term exposure - systemic effects		0,232 mg/m3	
Butan-2-one O,O',O'',O'''-silanetetrayltetraoxime 34206-40-1	General population	dermal	Long term exposure - systemic effects		0,067 mg/kg	
Butan-2-one O,O',O'',O'''-silanetetrayltetraoxime 34206-40-1	General population	oral	Long term exposure - systemic effects		0,067 mg/kg	
Octamethylcyclotetrasiloxane 556-67-2	Workers	inhalation	Long term exposure - systemic effects		73 mg/m3	
Octamethylcyclotetrasiloxane 556-67-2	Workers	inhalation	Long term exposure - local effects		73 mg/m3	
Octamethylcyclotetrasiloxane 556-67-2	General population	inhalation	Long term exposure - systemic effects		13 mg/m3	
Octamethylcyclotetrasiloxane 556-67-2	General population	inhalation	Long term exposure - local effects		13 mg/m3	
Octamethylcyclotetrasiloxane 556-67-2	General population	oral	Long term exposure - systemic effects		3,7 mg/kg	
Octamethylcyclotetrasiloxane 556-67-2	Workers	inhalation	Acute/short term exposure - local effects		73 mg/m3	
Octamethylcyclotetrasiloxane 556-67-2	Workers	inhalation	Acute/short term exposure - systemic effects		73 mg/m3	
Octamethylcyclotetrasiloxane 556-67-2	General population	inhalation	Acute/short term exposure - local effects		13 mg/m3	
Octamethylcyclotetrasiloxane 556-67-2	General population	inhalation	Acute/short term exposure - systemic effects		13 mg/m3	
Octamethylcyclotetrasiloxane 556-67-2	General population	oral	Acute/short term exposure - systemic effects		3,7 mg/kg	

Biological Exposure Indices:

None

8.2. Exposure controls:

Engineering controls:

Ensure good ventilation/extraction.

Respiratory protection:

Ensure adequate ventilation.

An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area

Filter type: A (EN 14387)

Hand protection:

Chemical-resistant protective gloves (EN 374).

Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):

nitrile rubber (NBR; \geq 0.4 mm thickness)

Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):

nitrile rubber (NBR; \geq 0.4 mm thickness)

This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:

Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.

Protective eye equipment should conform to EN166.

Skin protection:

Wear suitable protective clothing.

Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions. Personal protective equipment should conform to the relevant EN standard.

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

Appearance	paste grey
Odor	mild
Odour threshold	No data available / Not applicable
pH	Not applicable
Melting point	No data available / Not applicable
Solidification temperature	No data available / Not applicable
Initial boiling point	> 200 °C (> 392 °F)
Flash point	> 93 °C (> 199.4 °F)
Evaporation rate	No data available / Not applicable
Flammability	No data available / Not applicable
Explosive limits	No data available / Not applicable
Vapour pressure	< 5 mm hg
Relative vapour density:	Heavier than air
Density	1,44 - 1,49 g/cm ³
(ρ)	
Bulk density	No data available / Not applicable
Solubility	No data available / Not applicable
Solubility (qualitative) (Solvent: Water)	Polymerises in presence of water.
Partition coefficient: n-octanol/water	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Decomposition temperature	No data available / Not applicable
Viscosity	No data available / Not applicable
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Oxidising properties	No data available / Not applicable

9.2. Other information

No data available / Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

Polymerises in presence of water.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

No decomposition if used according to specifications.

Exposure to air or moisture over prolonged periods.

10.5. Incompatible materials

See section reactivity.

10.6. Hazardous decomposition products

Methyl ethyl ketoxime formed during cure.

Methanol is liberated slowly upon exposure to moisture.

SECTION 11: Toxicological information

General toxicological information:

Methylethyl ketoxime released during polymerisation of oxime curing RTV silicones is irritating to the respiratory system

Methylethyl ketoxime released during polymerisation of oxime curing silicones. It is harmful in contact with skin and is a skin sensitizer.

11.1. Information on toxicological effects

Acute oral toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Silicon compounds	LD50	> 2.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
2-butanone oxime 96-29-7	Acute toxicity estimate (ATE)	100 mg/kg		Expert judgement
Butan-2-one O,O',O'',O'''- silanetetrayltetraoxime 34206-40-1	LD50	2.463 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
octamethylcyclotetrasilox ane 556-67-2	LD50	> 4.800 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)

Acute dermal toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Silicon compounds	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
2-butanone oxime 96-29-7	Acute toxicity estimate (ATE)	1.100 mg/kg		Expert judgement
Butan-2-one O,O',O'',O'''-silanetetrayltetraoxime 34206-40-1	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
octamethylcyclotetrasiloxane 556-67-2	LD50	> 2.375 mg/kg	rat	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)

Acute inhalative toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Test atmosphere	Exposure time	Species	Method
octamethylcyclotetrasiloxane 556-67-2	LC50	36 mg/l	dust/mist	4 h	rat	OECD Guideline 403 (Acute Inhalation Toxicity)

Skin corrosion/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
octamethylcyclotetrasiloxane 556-67-2	not irritating		rabbit	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
2-butanone oxime 96-29-7	Category 1 (irreversible effects on the eye)		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Butan-2-one O,O',O'',O'''-silanetetrayltetraoxime 34206-40-1	irritating	1 h	rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
octamethylcyclotetrasiloxane 556-67-2	not irritating		rabbit	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Species	Method
Silicon compounds	sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
2-butanone oxime 96-29-7	sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Butan-2-one O,O',O'',O'''-silanetetrayltetraoxime 34206-40-1	sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
octamethylcyclotetrasiloxane 556-67-2	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Silicon compounds	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
2-butanone oxime 96-29-7	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		EPA OPPTS 870.5265 (The Salmonella typhimurium Bacterial Reverse Mutation Test)
2-butanone oxime 96-29-7	negative	mammalian cell gene mutation assay	with		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
2-butanone oxime 96-29-7	negative	DNA damage and repair assay, unscheduled DNA synthesis in mammalian cells in vitro			OECD Guideline 482 (Genetic Toxicology: DNA Damage and Repair, Unscheduled DNA Synthesis in Mammalian Cells In Vitro)
octamethylcyclotetrasiloxane 556-67-2	negative	bacterial gene mutation assay	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
octamethylcyclotetrasiloxane 556-67-2	negative	in vitro mammalian chromosome aberration test	with and without		equivalent or similar to OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
octamethylcyclotetrasiloxane 556-67-2	negative	mammalian cell gene mutation assay	with and without		equivalent or similar to OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Silicon compounds	negative	intraperitoneal		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
2-butanone oxime 96-29-7	negative	oral: gavage		rat	EPA OPPTS 870.5385 (In Vivo Mammalian Cytogenetic Tests: Bone Marrow Chromosomal Analysis)
2-butanone oxime 96-29-7	negative	oral: feed		Drosophila melanogaster	EPA OPPTS 870.5385 (In Vivo Mammalian Cytogenetic Tests: Bone Marrow Chromosomal Analysis)
octamethylcyclotetrasiloxane 556-67-2	negative	inhalation		rat	equivalent or similar to OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test)
octamethylcyclotetrasiloxane 556-67-2	negative	oral: gavage		rat	equivalent or similar to OECD Guideline 478 (Genetic Toxicology: Rodent Dominant Lethal Test)

Carcinogenicity

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Sex	Method
2-butanone oxime 96-29-7	carcinogenic	inhalation: vapour	3 - 18 m 6 h/d, 5 d/w	mouse	male	EPA OTS 798.3300 (Carcinogenicity)

Reproductive toxicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Test type	Route of application	Species	Method
2-butanone oxime 96-29-7	NOAEL F1 >= 200 mg/kg NOAEL F2 >= 200 mg/kg	Two generation study	oral: gavage	rat	not specified
octamethylcyclotetrasiloxane 556-67-2	NOAEL P 300 ppm NOAEL F1 300 ppm	two- generation study	inhalation	rat	equivalent or similar to OECD Guideline 416 (Two- Generation Reproduction Toxicity Study)

STOT-single exposure:

No data available.

STOT-repeated exposure::

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
Silicon compounds	NOAEL 10 mg/kg	oral: gavage		rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
2-butanone oxime 96-29-7	LOAEL 40 mg/kg	oral: gavage	13 w daily	rat	not specified
Butan-2-one O,O',O'',O'''- silanetetrayltetraoxime 34206-40-1	NOAEL 25 mg/kg	oral: drinking water	90 d daily: ad libitum	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
octamethylcyclotetrasiloxane 556-67-2	LOAEL 35 ppm	inhalation	6 h nose only inhalation 5 days/week for 13 weeks	rat	OECD Guideline 412 (Repeated Dose Inhalation Toxicity: 28/14-Day)
octamethylcyclotetrasiloxane 556-67-2	NOAEL 960 mg/kg	dermal	3 w 5 d/w	rabbit	equivalent or similar to OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

Aspiration hazard:

No data available.

SECTION 12: Ecological information

General ecological information:

Cured Loctite products are typical polymers and do not pose any immediate environmental hazards.

Precautions required with respect to Environmental Hazards of articles in which this product is used should be considered.

Do not empty into drains / surface water / ground water.

12.1. Toxicity

Toxicity (Fish):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
2-butanone oxime 96-29-7	LC50	320 - 1,000 mg/l	96 h	Leuciscus idus	DIN 38412-15
2-butanone oxime 96-29-7	NOEC	50 mg/l	14 d	Oryzias latipes	OECD Guideline 204 (Fish, Prolonged Toxicity Test: 14-day Study)
Butan-2-one O,O',O'',O'''-silanetetrayltetraoxime 34206-40-1	LC50	843 mg/l	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
Butan-2-one O,O',O'',O'''-silanetetrayltetraoxime 34206-40-1	NOEC	50 mg/l	14 d	Oryzias latipes	OECD Guideline 204 (Fish, Prolonged Toxicity Test: 14-day Study)
octamethylcyclotetrasiloxane 556-67-2	NOEC	0,0044 mg/l	93 d	Salmo gairdneri (new name: Oncorhynchus mykiss)	EPA OPPTS 797.1600 (Fish Early Life Stage Toxicity Test)
octamethylcyclotetrasiloxane 556-67-2	LC50	Toxicity > Water solubility	96 h	Oncorhynchus mykiss	EPA OTS 797.1400 (Fish Acute Toxicity Test)

Toxicity (Daphnia):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
2-butanone oxime 96-29-7	EC50	> 500 mg/l	48 h	Daphnia magna	EU Method C.2 (Acute Toxicity for Daphnia)
Butan-2-one O,O',O'',O'''-silanetetrayltetraoxime 34206-40-1	EC50	201 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
octamethylcyclotetrasiloxane 556-67-2	EC50	Toxicity > Water solubility	48 h	Daphnia magna	EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids)

Chronic toxicity to aquatic invertebrates

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
2-butanone oxime 96-29-7	NOEC	> 100 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Butan-2-one O,O',O'',O'''-silanetetrayltetraoxime 34206-40-1	NOEC	> 100 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
octamethylcyclotetrasiloxane 556-67-2	NOEC	7.9 µg/l	21 d	Daphnia magna	EPA OTS 797.1330 (Daphnid Chronic Toxicity Test)

Toxicity (Algae):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
2-butanone oxime 96-29-7	EC50	11,8 mg/l	72 h	Scenedesmus capricornutum	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-butanone oxime 96-29-7	NOEC	2,56 mg/l	72 h	Scenedesmus capricornutum	OECD Guideline 201 (Alga, Growth Inhibition Test)
Butan-2-one O,O',O'',O'''- silanetetrayltetraoxime 34206-40-1	EC50	16 mg/l	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Butan-2-one O,O',O'',O'''- silanetetrayltetraoxime 34206-40-1	NOEC	2,6 mg/l	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
octamethylcyclotetrasiloxane 556-67-2	EC50	Toxicity > Water solubility	96 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	EPA OTS 797.1050 (Algal Toxicity, Tiers I and II)
octamethylcyclotetrasiloxane 556-67-2	EC10	0,022 mg/l	96 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	EPA OTS 797.1050 (Algal Toxicity, Tiers I and II)

Toxicity to microorganisms

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
2-butanone oxime 96-29-7	EC10	177 mg/l	17 h		DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm- Test)
octamethylcyclotetrasiloxane 556-67-2	EC50	Toxicity > Water solubility	3 h	activated sludge	ISO 8192 (Test for Inhibition of Oxygen Consumption by Activated Sludge)

12.2. Persistence and degradability

The product is not biodegradable.

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
2-butanone oxime 96-29-7	inherently biodegradable	aerobic	70 %	14 d	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
Butan-2-one O,O',O'',O'''- silanetetrayltetraoxime 34206-40-1	not readily biodegradable.	aerobic	28 %	28 day	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
octamethylcyclotetrasiloxane 556-67-2	not readily biodegradable.	aerobic	3,7 %	29 d	OECD Guideline 310 (Ready Biodegradability CO ₂ in Sealed Vessels (Headspace Test))

12.3. Bioaccumulative potential

Hazardous substances CAS-No.	Bioconcentration factor (BCF)	Exposure time	Temperature	Species	Method
2-butanone oxime 96-29-7	0,5 - 0,6	42 d	25 °C	Oryzias latipes	OECD Guideline 305 C (Bioaccumulation: Test for the Degree of Bioconcentration in Fish)
octamethylcyclotetrasiloxane 556-67-2	12.400	28 d		Pimephales promelas	EPA OTS 797.1520 (Fish Bioconcentration Test-Rainbow Trout)

12.4. Mobility in soil

Cured adhesives are immobile.

Hazardous substances CAS-No.	LogPow	Temperature	Method
2-butanone oxime 96-29-7	0,65	25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
octamethylcyclotetrasiloxane 556-67-2	6,488	25,1 °C	OECD Guideline 123 (Partition Coefficient (1-Octanol / Water), Slow-Stirring Method)

12.5. Results of PBT and vPvB assessment

Hazardous substances CAS-No.	PBT / vPvB
2-butanone oxime 96-29-7	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Butan-2-one O,O',O'',O'''-silanetetrayltetraoxime 34206-40-1	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
octamethylcyclotetrasiloxane 556-67-2	Fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

Dispose of in accordance with local and national regulations.

Contribution of this product to waste is very insignificant in comparison to article in which it is used

Disposal of uncleaned packages:

After use, tubes, cartons and bottles containing residual product should be disposed of as chemically contaminated waste in an authorised legal land fill site or incinerated.

Disposal must be made according to official regulations.

Waste code

08 04 09* waste adhesives and sealants containing organic solvents and other dangerous substances

The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

SECTION 14: Transport information

- 14.1. UN number**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.2. UN proper shipping name**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.3. Transport hazard class(es)**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.4. Packing group**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.5. Environmental hazards**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.6. Special precautions for user**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**
not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

VOC content < 3 %
(2010/75/EC)

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

- H226 Flammable liquid and vapor.
- H228 Flammable solid.
- H301 Toxic if swallowed.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.
- H350 May cause cancer.
- H361f Suspected of damaging fertility.
- H370 Causes damage to organs.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H410 Very toxic to aquatic life with long lasting effects.

Further information:

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This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

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