



Safety Data Sheet according to GB/T 16483-2008

Page 1 of 11 .

Loctite 5699

SDS No. : 152852

V001.18

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1. Identification of the substance/preparation and of the company/undertaking

Product name: Loctite 5699

Intended use: Silicone sealant

Company name:

Henkel (China) Investment Co. Ltd.
No.928 Zhangheng Rd.
201203 Pudong, Shanghai, P.R. China

China

Phone: +86-21-2891 8000

Fax-no.: +86-21-2891 5137

Revision date: 11.04.2016

Emergency information: Emergency telephone: +86 532 8388 9090 (24h).

2. Hazards identification

Classification of the substance or mixture according to GB 13690-2009 (General rule for classification and hazard communication of chemicals):

<u>Hazard Class</u>	<u>Hazard Category</u>
Serious eye damage/eye irritation	Category 1
Skin sensitizer	Category 1
Carcinogenicity	Category 2

Label elements according to GB 15258-2009 (General rules for preparation of precautionary label for chemicals):

Hazard pictogram:



Signal word: Danger

Hazard statement:	H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H351 Suspected of causing cancer.
Prevention:	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves/protective clothing/eye protection/face protection.
Response:	P302+P352 IF ON SKIN: Wash with plenty of water. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 IF exposed or concerned: Get medical advice/attention. P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P362+P364 Take off contaminated clothing and wash it before reuse.
Storage:	P405 Store locked up.
Disposal:	P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

3. Composition / information on ingredients

General description: Mixture
Declaration of the ingredients according to GB 13690-2009:

Hazard component CAS-No.	Content	GHS Classification
Filler proprietary Proprietary	20- < 30 %	
Oximino silane Proprietary	1- < 10 %	Acute toxicity 5; Dermal H313 Serious eye damage/eye irritation 1 H318 Skin sensitizer 1 H317 Specific target organ toxicity - repeated exposure 2 H373 Acute hazards to the aquatic environment 3 H402
Butanone oxime 96-29-7	1- < 10 %	Flammable liquids 3 H226 Flammable liquids 4 H227 Acute toxicity 5; Oral H303 Acute toxicity 4; Dermal H312 Serious eye damage/eye irritation 1 H318 Skin sensitizer 1 H317 Carcinogenicity 2 H351 Acute hazards to the aquatic environment 3 H402
Aluminium powder (stabilised) 7429-90-5	0.1- < 1 %	Flammable gases 2 H221 Flammable solids 1 H228
silano reactivos Proprietary	0.1- < 1 %	Flammable solids 1 H228 Acute toxicity 5; Oral H303 Serious eye damage/eye irritation 2A H319 Skin sensitizer 1 H317 Specific target organ toxicity - repeated exposure 2 H373 Acute hazards to the aquatic environment 3 H402

Only hazardous ingredients for which a classification according to GB 13690-2009 is already available are displayed in this table. For full text of the Hazard statements see section 16 "Other information".

4. First aid measures

Skin contact: Wash with soap and water.
Wipe off paste with paper towel or cloth.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Get medical attention.

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

Ingestion: Keep individual calm.
Do not induce vomiting.
Get medical attention.

5. Fire fighting measures

Extinguishing media: Carbon dioxide, foam, powder

Fire-fighting method: In case of fire, keep containers cool with water spray.

Notice and measures for firing fighting: Do not expose to direct heat.
Wear self-contained breathing apparatus.

6. Accidental release measures

Emergency measures: Avoid contact with skin and eyes.
Do not let product enter drains.

Clean-up methods: Scrape up as much material as possible.
Ensure adequate ventilation.
Store in a partly filled, closed container until disposal.

7. Handling and storage

Notice for handling: Use only in well-ventilated areas.
Vapours should be extracted to avoid inhalation.

Notice for storage: Store in a cool, well-ventilated place.
Almacenar entre 0°C and 32°C. (32°F and 90°F)

8. Exposure controls / personal protection

Hazardous components	GBZ 2.1-2007	ACGIH	NIOSH	OSHA
Calcium carbonate	4 mg/m ³ PC-TWA 8 mg/m ³ PC-TWA	10 mg/m ³ TWA		none
Aluminium powder (stabilised)	3 mg/m ³ PC-TWA	1 mg/m ³ TWA		none

Engineering controls: Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

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

Eye protection: Wear protective glasses.

Body protection: Wear suitable protective clothing.

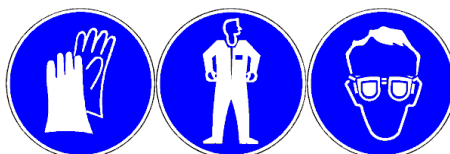
Hand protection:

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; >= 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; >= 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.

Other protection:

The selection of PPE shall at least compliant with "Law of the People's Republic of China on Prevention and Control of Occupational Diseases" and "Code of practice for selection of personal protective equipments" (GB/T 11651-2008).
Good industrial hygiene practices should be observed.

Pictograms for recommended PPE:



9. Physical and chemical properties

Physical state:	paste	Appearance:	grey
pH:	Not available. Not applicable	Melting point:	Not available.
Boiling point:	> 200 °C (> 392 °F)	Density:	1.5 g/cm ³ 1.5 g/cm ³
Flash point:	> 93 °C (> 199.4 °F)	Ignition temperature:	Not available.
Solubility in water	Polymerises in presence of water.	Viscosity:	Not available.

10. Stability and reactivity

Stability:	Stable
Conditions to avoid:	High temperatures. Moisture.
Incompatible products:	Polymerises in presence of water.
Decomposition products:	Oxides of silicon. Oxides of carbon. Methyl ethyl ketoxime formed during cure. Formaldehyde.
Hazardous polymerization:	Will not occur.

11. Toxicological information

Dermal toxicity:
Acute toxicity estimate (ATE) : > 5,000 mg/kg

Method: Calculation method

Other remarks:

Limited evidence of a carcinogenic effect
Contains a substance classified R40 in the EU: >1%.

Acute toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Filler proprietary Proprietary	LD50	> 2,000 mg/kg	oral	90 min	rat	OECD Guideline 420 (Acute Oral Toxicity) Expert judgement
	Acute toxicity estimate (ATE)	5.1 mg/l	inhalation		rat	
Oximino silane Proprietary	LC0	> 2,000 mg/kg	oral		rat	OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure) OECD Guideline 402 (Acute Dermal Toxicity)
	LD50	> 2,000 mg/kg	dermal		rat	
Butanone oxime 96-29-7	LD50	2,326 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity) Expert judgement
	Acute toxicity estimate (ATE)	1,100 mg/kg	dermal		rabbit	
silano reactivos Proprietary	LD50	> 1,000 mg/kg	dermal		rat	OECD Guideline 402 (Acute Dermal Toxicity)
	LD50	2,463 mg/kg	oral		rat	
	LD50	> 2,000 mg/kg	dermal		rat	OECD Guideline 401 (Acute Oral Toxicity) OECD Guideline 402 (Acute Dermal Toxicity)
	LD50	> 2,000 mg/kg	dermal		rat	

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Butanone oxime 96-29-7	Category 1 (irreversible effects on the eye)		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
silano reactivos Proprietary	irritating	1 h	rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
Oximino silane Proprietary	Sensitizing	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Butanone oxime 96-29-7	sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
silano reactivos Proprietary	sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Oximino silane Proprietary	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Oximino silane Proprietary	negative	intraperitoneal		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)

Repeated dose toxicity:

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
Oximino silane Proprietary	NOAEL=10 mg/kg	oral: gavage		rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
silano reactivos Proprietary	NOAEL=25 mg/kg	oral: drinking water	90 ddaily: ad libitum	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

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.

Ecotoxicity:

Do not empty into drains / surface water / ground water.
It is expected to be non hazardous to aquatic species.

Other adverse effects:

Do not empty into drains, soil or bodies of water.

Toxicity:

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Filler proprietary Proprietary	LC50	> 56,000 mg/l	Fish	96 h	Gambusia affinis	OECD Guideline 203 (Fish, Acute Toxicity Test)
Filler proprietary Proprietary	EC50	265 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Filler proprietary Proprietary	EC50	137 mg/l	Algae	5 d	Nitzschia sp.	OECD Guideline 201 (Alga, Growth Inhibition Test)
Filler proprietary Proprietary	EC 50	> 56,000 mg/l	Bacteria	30 min		
Oximino silane Proprietary	LC50	> 560 mg/l	Fish	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Oximino silane Proprietary	NOEC	50 mg/l	Fish	14 d	Oryzias latipes	OECD Guideline 204 (Fish, Prolonged Toxicity Test: 14-day Study)
Oximino silane Proprietary	EC50	201 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Oximino silane Proprietary	EC50	94 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Oximino silane Proprietary	NOEC	30 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Butanone oxime 96-29-7	LC50	320 - 1,000 mg/l	Fish	96 h	Leuciscus idus	DIN 38412-15
Butanone oxime 96-29-7	NOEC	50 mg/l	Fish	14 d	Oryzias latipes	OECD Guideline 204 (Fish, Prolonged Toxicity Test: 14-day Study)
Butanone oxime 96-29-7	EC50	> 500 mg/l	Daphnia	48 h	Daphnia magna	EU Method C.2 (Acute Toxicity for Daphnia)
Butanone oxime 96-29-7	EC50	11.8 mg/l	Algae	72 h	Scenedesmus capricornutum	OECD Guideline 201 (Alga, Growth Inhibition Test)
Butanone oxime 96-29-7	NOEC	2.56 mg/l	Algae	72 h	Scenedesmus capricornutum	OECD Guideline 201 (Alga, Growth Inhibition Test)
Butanone oxime 96-29-7	EC10	177 mg/l	Bacteria	17 h		DIN 38412, part 8 (Pseudomonas Zellvermehrungshe mm-Test)
Aluminium powder (stabilised) 7429-90-5	NOEC	> 100 mg/l	Fish	96 h	Salmo trutta	OECD Guideline 203 (Fish, Acute Toxicity Test)
silano reactivos Proprietary	LC50	843 mg/l	Fish	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
silano reactivos Proprietary	NOEC	50 mg/l	Fish	14 d	Oryzias latipes	OECD Guideline 204 (Fish, Prolonged Toxicity Test: 14-day Study)
silano reactivos Proprietary	EC50	201 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
silano reactivos Proprietary	EC50	16 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella	OECD Guideline 201 (Alga, Growth

silano reactivos Proprietary	NOEC	2.6 mg/l	Algae	72 h	subcapitata) Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	Inhibition Test) OECD Guideline 201 (Alga, Growth Inhibition Test)
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Persistence and degradability:

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
Oximino silane Proprietary	Not readily biodegradable.	aerobic	26 %	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
Butanone oxime 96-29-7	inherently biodegradable	aerobic	70 %	OECD Guideline 302 B (Inherent biodegradability: Zahn- Wellens/EMPA Test)
silano reactivos Proprietary	Not readily biodegradable.	aerobic	28 %	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))

Bioaccumulative potential / Mobility in soil:

Hazardous components CAS-No.	LogKow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
Filler proprietary Proprietary	-2.12					
Butanone oxime 96-29-7		0.5 - 0.6	42 d	Oryzias latipes	25 °C	OECD Guideline 305 C (Bioaccumulation: Test for the Degree of Bioconcentration in Fish)
Butanone oxime 96-29-7	0.65				25 °C	OECD Guideline 107 (Partition Coefficient (n- octanol / water), Shake Flask Method)

13. Disposal considerations

Product disposal:

If the waste is classified as hazardous waste according to GB 5085.7-2007 (Identification standards for hazardous wastes, General Specifications). Dispose of as hazardous waste in compliance with "Regulation on the Safety Management of Hazardous Chemicals", "Law of the People's Republic of China on the prevention and control of Environmental Pollution by Solid Waste", "National Catalogue of Hazardous Waste".

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.

14. Transport information

General information:

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

Notice For Transportation:

Transport according to local and national regulations. Ensure containers will not leak, collapse, or being damaged when transported. DO NOT transport with incompatible materials. Transportation vehicle should be equipped with right fire-fighting equipment in case of emergency. Avoid solarization, drenched and high temperature when transported.

15. Regulatory information

The following laws and regulations lay down provisions in terms of chemicals safety use, storage, transportation, loading/unloading, classification as well as symbol.

“Law of the People's Republic of China on Work Safety” (Adopted by the 28th meeting of 9th NPC standing committee on 29th June 2002, revised by 10th meeting of 12nd NPC standing committee on 31st Aug 2014).

“Law of the People's Republic of China on the Prevention and Treatment of Occupational Diseases” (Adopted by the 24th meeting of 9th NPC standing committee on 27th October 2001, revised by 24th meeting of 11st NPC standing committee on 31st Dec 2011).

“Law of the People's Republic of China on environmental protection” (Adopted by 11st meeting of 7th NPC standing committee on 26th December 1989, revised by 8th meeting of 12nd NPC standing committee on 24th Apr 2014).

“Regulation on the Safety Management of Hazardous Chemicals” (Adopted by 144th State Council executive meeting on 16th February 2011).

“Regulations on License to Work Safety” (Adopted by 54th State Council executive meeting on 29th July 2014).

China Inventory of Existing Chemicals:

All components are listed or are exempt from Inventory of Existing Chemical Substances in China.

16. Other information

Issue date:

15.02.2017

Issue department:

Dayong Tian, Product Safety & Regulatory Affairs Specialist for Greater China

Disclaimer:

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. The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates (“Henkel”) does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user’s responsibility to determine the suitability of Henkel’s products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel’s products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel’s products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

Others:

The full text of all abbreviations indicated by codes in this safety data sheet section 3 are as follows:

H221 Flammable gas.

H226 Flammable liquid and vapor.

H227 Combustible liquid.

H228 Flammable solid.

H303 May be harmful if swallowed.

H312 Harmful in contact with skin.

H313 May be harmful in contact with skin.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H351 Suspected of causing cancer.

H373 May cause damage to organs through prolonged or repeated exposure.

H402 Harmful to aquatic life.

