



Safety Data Sheet according to GB/T 16483-2008

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LOCTITE FREKOTE WOLO 1L SFDN

SDS No. : 153841

V001.5

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

Product name: LOCTITE FREKOTE WOLO 1L SFDN

Intended use: Release agent

Company name:

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Revision date: 09.04.2019

Emergency information: Emergency telephone: +86 21 2891 8311 (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>
Flammable liquids	Category 2
Skin corrosion/irritation	Category 2
Aspiration hazard	Category 1
Acute hazards to the aquatic environment	Category 2
Chronic hazards to the aquatic environment	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:	H225 Highly flammable liquid and vapor. H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation. H411 Toxic to aquatic life with long lasting effects.
Prevention:	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 Keep container tightly closed. P240 Ground and bond container and receiving equipment. P241 Use explosion-proof electrical/ventilating/lighting equipment. P242 Use non-sparking tools. P243 Take action to prevent static discharges. P264 Wash hands thoroughly after handling. P273 Avoid release to the environment. P280 Wear protective gloves, eye protection, and face protection.
Response:	P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. P331 Do NOT induce vomiting. P332+P313 If skin irritation occurs: Get medical advice/attention. P362+P364 Take off contaminated clothing and wash it before reuse. P370+P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction. P391 Collect spillage.
Storage:	P403+P235 Store in a well-ventilated place. Keep cool. 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
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	50- < 70 %	Flammable liquids 2 H225 Skin corrosion/irritation 2 H315 Aspiration hazard 1 H304 Acute hazards to the aquatic environment 2 H401 Chronic hazards to the aquatic environment 2 H411
Naphtha (petroleum), heavy alkylate 64741-65-7	30- < 50 %	Flammable liquids 3 H226 Aspiration hazard 1 H304 Chronic hazards to the aquatic environment 2 H411
Naphtha (petroleum), hydrotreated heavy (<0.1% benzene) 64742-48-9	2.5- < 10 %	Aspiration hazard 1 H304 Chronic hazards to the aquatic environment 4 H413
Reaction product of tris(n-methylamino)methylsilane (TMAS) and silanol terminated polydimethylsiloxane (PDMS) 1432471-92-5	0.1- < 1 %	Flammable liquids 1 H224 Pyrophoric liquids 1 H250 Substances and mixtures, which on contact with water, emit flammable gases 1 H260 Acute toxicity 4; Inhalation H332 Skin corrosion/irritation 2 H315 Serious eye damage/eye irritation 1 H318 Skin sensitizer 1 H317 Specific target organ toxicity - single exposure 3 H335
2,2,4-Trimethylpentane 540-84-1	0.1- < 0.25 %	Flammable liquids 2 H225 Skin corrosion/irritation 2 H315 Specific target organ toxicity - single exposure 3 H336 Aspiration hazard 1 H304 Acute hazards to the aquatic environment 1 H400 Chronic hazards to the aquatic environment 1 H410

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:

Rinse with running water and soap. Apply replenishing cream. Change all contaminated clothing. If necessary, see a dermatologist.

Eye contact: Flush eyes with plenty of water for at least 5 minutes. If irritation persists seek medical attention.
Seek medical attention from a specialist.

Inhalation: Move to fresh air, consult doctor if complaint persists.

Ingestion: Rinse mouth, do not induce vomiting, consult a doctor.

5. Fire fighting measures

Hazardous combustion products: See section 10.

Extinguishing media: Carbon dioxide, foam, powder
Water spray jet

Fire-fighting method: Cool endangered containers with water spray jet.

Notice and measures for firing fighting: Can form explosive gas/air mixtures.
Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Keep personnel upwind of fire.

6. Accidental release measures

Emergency measures: Keep away from sources of ignition and naked flames.
Ensure adequate ventilation.
Do not empty into drains / surface water / ground water.
Keep unprotected persons away.
Collect contaminated washing water for appropriate disposal.
Wear protective equipment.
Inform authorities in the event of product spillage to water courses or sewage systems.
See advice in section 8

Clean-up methods: Remove mechanically.
Wipe up using absorbent material and subject to waste incineration.
Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment during clean-up.
Dispose of contaminated material as waste according to Section 13.

7. Handling and storage

Notice for handling: Avoid skin and eye contact.
Take measures to prevent the build-up of electrostatic charges.
Do not spray onto flames or red-hot objects.
Ventilate working rooms thoroughly. Avoid naked flames, sparking and sources of ignition. Switch off electrical devices. Do not smoke, do not weld. Do not empty waste into waste water drains.

Notice for storage: Refer to Technical Data Sheet
Do not use in organic solvents soluble plastic containers.
Do not store together with oxidants.

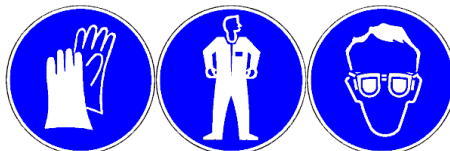
8. Exposure controls / personal protection

Hazardous components	GBZ 2.1-2007	ACGIH	NIOSH	OSHA
2,2,4-Trimethylpentane	500 mg/m ³ PC-TWA 500 mg/m ³ PC-TWA	300 ppm TWA 300 ppm TWA		none

Engineering controls: Ventilate working rooms thoroughly. Avoid naked flames, sparking and sources of ignition. Switch off electrical devices. Do not smoke, do not weld. Do not empty waste into waste water drains.

Respiratory protection:	In case of insufficient ventilation, wear suitable respiratory equipment. Suitable respiratory protection: Use filter A-P2 if vapours/aerosols occur which may be inhaled.
Eye protection:	Protective goggles or protective shield
Body protection:	Wear protective equipment. apron protective boots
Hand protection:	In circumstances where there is a potential for prolonged or repeated skin contact, the use of polyvinyl chloride or nitrile rubber gauntlets or equivalent solvent resistant gloves is recommended.
Other protection:	Avoid eye contact. Avoid skin-contact. Use solvent-resistant skin protection cream. Do not breathe dust and vapors. Wash hands before work breaks and after finishing work. Do not eat, drink or smoke while working.

Pictograms for recommended PPE:



9. Physical and chemical properties

Physical state:	liquid	Appearance:	Colorless Liquid
pH:	Not applicable	Melting point:	Not available.
Boiling point:	> 112 °C (> 233.6 °F)	Density:	0.72 g/cm ³
Vapor density:	Not available.	Vapor pressure:	Not available.
Flash point:	6 °C (42.8 °F)	Ignition temperature:	Not available.
Lower explosive limit:	Not available.	Upper explosive limit:	Not available.
Solubility in water	Slight (20 °C)	Viscosity:	Not available.
Auto-ignition temperature:	Not available.	Flammability:	Not available.
Octanol / water distribution coefficient:	Not available.	Decomposition temperature:	Not available.

10. Stability and reactivity

Stability:	Stable under normal conditions of storage and use.
Conditions to avoid:	No decomposition if stored and applied as directed. Vapours may form explosive mixture with air. Spray mist may be flammable at temperatures below the flash point. Heat, flames, sparks and other sources of ignition.
Incompatible products:	Reacts with strong oxidants. Reaction with water.
Decomposition products:	Hydrocarbons Irritating organic vapours. At higher temperature carbon oxides and nitrogen oxides may be generated.
Hazardous polymerization:	Will not occur.

11. Toxicological information

General toxicological information:

The present product is a chemical preparation within the meaning of the chemicals act. The following evaluation has been made on the basis of the toxicological data and content by weight of the individual ingredients.

Health hazard: may damage lungs if swallowed.

Narcotic effects at higher concentrations.

Acute toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	LD50	> 7,100 mg/kg	oral	4 h	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity) OECD Guideline 403 (Acute Inhalation Toxicity) not specified
	LC50	> 9.4 mg/l	inhalation		rat	
	LD50	> 2,200 mg/kg	dermal		rabbit	
Naphtha (petroleum), heavy alkylate 64741-65-7	LD50	> 5,000 mg/kg	oral	4 h	rat	OECD Guideline 401 (Acute Oral Toxicity) OECD Guideline 402 (Acute Dermal Toxicity)
	LD50	> 5,000 mg/kg	dermal		rabbit	
Naphtha (petroleum), hydrotreated heavy (<0.1% benzene) 64742-48-9	LD50	> 5,000 mg/kg	oral	4 h	rat	OECD Guideline 401 (Acute Oral Toxicity) OECD Guideline 403 (Acute Inhalation Toxicity) OECD Guideline 402 (Acute Dermal Toxicity)
	LC50	> 2,000 mg/kg	inhalation		rat	
	LD50	> 2,000 mg/kg	dermal		rabbit	
2,2,4-Trimethylpentane 540-84-1	LD50	> 5,000 mg/kg	oral	4 h	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity) equivalent or similar to OECD Guideline 403 (Acute Inhalation Toxicity)
	LC50	> 33.52 mg/l	inhalation		rat	
	LD50	> 2,000 mg/kg	dermal		rabbit	
						equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	not irritating		rabbit	EPA OPPTS 870.2400 (Acute Eye Irritation)
Naphtha (petroleum), hydrotreated heavy (<0.1% benzene) 64742-48-9	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	not sensitising	Guinea pig maximisation test	guinea pig	equivalent or similar to OECD Guideline 406 (Skin Sensitisation)
Naphtha (petroleum), hydrotreated heavy (<0.1% benzene) 64742-48-9	not sensitising	Buehler 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
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	negative negative negative	bacterial reverse mutation assay (e.g Ames test) in vitro mammalian chromosome aberration test mammalian cell gene mutation assay	with and without without with and without		equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay) equivalent or similar to OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	negative	inhalation		rat	equivalent or similar to OECD Guideline 478 (Genetic Toxicology: Rodent Dominant Lethal Test)
Naphtha (petroleum), hydrotreated heavy (<0.1% benzene) 64742-48-9	negative negative	bacterial reverse mutation assay (e.g Ames test) mammalian cell gene mutation assay	with and without with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay) OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Naphtha (petroleum), hydrotreated heavy (<0.1% benzene) 64742-48-9	negative	intraperitoneal		rat	OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test)

Repeated dose toxicity:

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5		inhalation: vapour	12 weeks 6 hours/day, 5 days/week	rat	equivalent or similar to OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)
Naphtha (petroleum), hydrotreated heavy (<0.1% benzene) 64742-48-9		inhalation: vapour	6 h/d, 5 d/w for 4 weeksdaily	rat	OECD Guideline 412 (Repeated Dose Inhalation Toxicity: 28/14-Day)
Naphtha (petroleum), hydrotreated heavy (<0.1% benzene) 64742-48-9	NOAEL=3,750 mg/kg	dermal	once per day	rat	OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

12. Ecological information**General ecological information:**

If used properly the product does not enter the drains.

On the basis of raw materials and comparable substances contained in the product the following ecological evaluation is obtained:

Toxic to aquatic organisms

May cause long-term adverse effects in the aquatic environment.

Toxicity:

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	LC50	18.4 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	EL50	2.4 mg/l	Daphnia	48 h	Daphnia magna	other guideline:
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	EL50	10 - 30 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	NOELR	10 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Naphtha (petroleum), heavy alkylate 64741-65-7	NOELR	0.192 mg/l	Fish	28 d	Oncorhynchus mykiss	QSAR (Quantitative Structure Activity Relationship)
2,2,4-Trimethylpentane 540-84-1	LC50	> 0.1 - 1 mg/l	Fish	96 h	not specified	OECD Guideline 203 (Fish, Acute Toxicity Test)
2,2,4-Trimethylpentane 540-84-1	EC0	10,000 mg/l	Bacteria		not specified	not specified

Persistence and degradability:

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
Hydrocarbons, C7-C9, isoalkanes 1174921-67-5	inherently biodegradable	aerobic	22.4 %	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Naphtha (petroleum), heavy alkylate 64741-65-7	not readily biodegradable.	aerobic	8 - 22 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
2,2,4-Trimethylpentane 540-84-1	not readily biodegradable.	aerobic	> 0 - 60 %	OECD 301 A - F

Bioaccumulative potential / Mobility in soil:

Hazardous components CAS-No.	LogPow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
2,2,4-Trimethylpentane 540-84-1	4.5					not specified

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.

14. Transport information

Road transport CN_DG:

Class: 3
Packing group: II
Classification code:
Hazard ident. number:
UN no.: 1866
Label: 3
Technical name: RESIN SOLUTION

Marine transport IMDG:

Class: 3
Packing group: II
UN no.: 1866
Label: 3
EmS: F-E ,S-E
Seawater pollutant: Marine pollutant
Proper shipping name: RESIN SOLUTION (Isoalkane C7 - C10)

Air transport IATA:

Class: 3
Packing group: II
Packaging instructions (passenger): 353
Packaging instructions (cargo): 364
UN no.: 1866
Label: 3
Proper shipping name: Resin solution

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 21st meeting of 12nd NPC standing committee on 2nd Jul 2016).

“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 32nd State Council executive meeting on 4th December 2013).

“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: 30.05.2019
Issue department: Product Safety & Regulatory Affairs for China

Disclaimer:

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Others:

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

H224 Extremely flammable liquid and vapor.
H225 Highly flammable liquid and vapor.
H226 Flammable liquid and vapor.
H250 Catches fire spontaneously if exposed to air.
H260 In contact with water releases flammable gases which may ignite spontaneously.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H400 Very toxic to aquatic life.
H401 Toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
H413 May cause long lasting harmful effects to aquatic life.