

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

FRAGOL

FRAGOLTHERM X-80

Version number: 4.0
Replaces version of: 2016-11-11 (GHS 2)

Revision: 2019-08-29

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

1.1 Product identifier

Trade name	FRAGOLTHERM X-80
Identification of the substance	Dimethyl siloxane
CAS number	63148-62-9

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

Relevant identified uses	Heat transfer fluid Professional use Industrial use
Uses advised against	Do not use for private purposes (household)

1.3 Details of the supplier of the safety data sheet

FRAGOL AG
Solinger Straße 16
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Germany

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e-mail (competent person) htf@fragol.de

1.4 Emergency telephone number

Emergency information service	+49 (0)208-300 02-50 This number is only available during the following office hours: Mon-Fri 09:00 - 17:00
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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

This substance does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

Additional information

Does not contain any substances that are assessed to be a PBT or a vPvB >0.1%.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

not required

2.3 Other hazards

Special danger of slipping by leaking/spilling product.

Results of PBT and vPvB assessment

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SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance	Dimethyl siloxane
Identifiers	
CAS No	63148-62-9
EC No	polymer

Remarks

All the percentages given are percentages by weight unless stated otherwise.

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

Provide fresh air. If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

Take off contaminated clothing. After contact with skin, wash immediately with plenty of water and soap.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. In all cases of doubt, or when symptoms persist, seek medical advice.

Following ingestion

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

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 spray, Alcohol resistant foam, Dry extinguishing powder, Carbon dioxide (CO₂)

Unsuitable extinguishing media

Water jet.

5.2 Special hazards arising from the substance or mixture

Vapours may form explosive mixtures with air. Fire is burning stronger than expected. Flashback at long range possible.

Hazardous combustion products

During fire hazardous fumes/smoke could be produced. Carbon dioxide (CO₂). Silicon oxides. Formaldehyde (the product may release formaldehyde vapors suspected of causing cancer at temperatures above 150 °C).

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5.3 Advice for firefighters

Keep containers cool with water spray. In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

Self-contained breathing apparatus (EN 133). Standard protective clothing for firefighters.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety. Ventilate affected area.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases. Wear suitable protective clothing and gloves.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece).

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Keep away from sources of ignition - No smoking. Use only in well-ventilated areas. Take precautionary measures against static discharge.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- flammability hazards

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge.

- incompatible substances or mixtures

Keep away from oxidizing substances. Keep away from reducing substances.

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Control of effects

Protect against external exposure, such as

Heat. High temperatures. UV-radiation/sunlight. Static discharges.

Consideration of other advice

Store in a well-ventilated place. Keep container tightly closed.

7.3 Specific end use(s)

There is no additional information.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

No information available.

Relevant DNELs/DMELs/PNECs and other threshold levels

No data available.

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection



Use safety goggles with side protection (EN 166).

Skin protection

Protective clothing (EN 340 & EN ISO 13688).

- hand protection



Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- type of material

PVC: polyvinyl chloride, NBR: acrylonitrile-butadiene rubber, IIR: isobutene-isoprene (butyl) rubber, PVA: polyvinyl alcohol, Nitrile, NP: Neoprene

- material thickness

use gloves with a minimum material thickness 0,35 mm

- breakthrough times of the glove material

Use gloves with a minimum breakthrough times of the glove material. >60 minutes (permeation: level 3).

- other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Type: A (against organic gases and vapours with a boiling point of > 65 °C , colour code: Brown). Breathing apparatus only in case of aerosol or mist formation.

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Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Colour	colourless
Odour	characteristic

Other safety parameters

pH (value)	not determined
Melting point/freezing point	not determined
Initial boiling point and boiling range	not determined
Flash point	>170 °C (ASTM D 93)
Evaporation rate	not determined
Flammability (solid, gas)	not relevant (fluid)
Explosive limits	not determined
Vapour pressure	not determined
Density	~0.94 g/cm ³ at 25 °C
Vapour density	this information is not available

Solubility(ies)

- water solubility	insoluble
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Partition coefficient

- n-octanol/water (log KOW)	this information is not available
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Auto-ignition temperature	not determined
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Viscosity

- kinematic viscosity	10 mm ² /s at 25 °C
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Explosive properties	none
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Oxidising properties	none
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9.2 Other information

There is no additional information.

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SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Measurements have shown that a small amount of formaldehyde is split off at temperatures above about 150 °C by oxidative degradation.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5 Incompatible materials

Oxidisers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification according to GHS (1272/2008/EC, CLP)

This substance does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

Acute toxicity

Shall not be classified as acutely toxic.

Calculated value, referring to a component of the mixture.

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin. May cause slight irritation.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant. May cause slight irritation.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

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SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

The substance fulfils the very bioaccumulative criterion. The bioaccumulation potential is low.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Does not contain any substances that are assessed to be a PBT or a vPvB >0.1%.

12.6 Other adverse effects

Data are not available.

Endocrine disrupting potential

Not listed.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment.

Waste treatment of containers/packagings

Handle contaminated packages in the same way as the substance itself.

Relevant provisions relating to waste

List of wastes, Decision 2000/532/EC on the list of waste

Waste catalogue ordinance (Germany)

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1	UN number	not subject to transport regulations
14.2	UN proper shipping name	not relevant
14.3	Transport hazard class(es)	none
14.4	Packing group	not assigned to a packing group
14.5	Environmental hazards	non-environmentally hazardous acc. to the dangerous goods regulations
14.6	Special precautions for user	There is no additional information.
14.7	Transport in bulk according to Annex II of MARPOL and the IBC Code	Not applicable.

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Version number: 4.0
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Revision: 2019-08-29

Information for each of the UN Model Regulations

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

Not subject to ADR, RID and ADN.

International Maritime Dangerous Goods Code (IMDG)

Not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)

Not subject to ICAO-IATA.

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

Restrictions according to REACH, Annex XVII

Not listed.

List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list

Not listed.

Seveso Directive

2012/18/EU (Seveso III)			
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements	Notes
	not assigned		

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance by the supplier.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)
2.1	Additional information: Containing a PBT-/vPvB-substance in a concentration of $\geq 0,1\%$.	Additional information: Does not contain any substances that are assessed to be a PBT or a vPvB $>0.1\%$.
2.3	Results of PBT and vPvB assessment: Containing a PBT-/vPvB-substance in a concentration of $\geq 0,1\%$.	Results of PBT and vPvB assessment: Does not contain any substances that are assessed to be a PBT or a vPvB $>0.1\%$.
3.1		Impurities and additives, classification acc. to GHS: change in the listing (table)
8.1		Relevant DNELs of components of the mixture: change in the listing (table)
8.1		Relevant PNECs of components of the mixture: change in the listing (table)
9.1	Auto-ignition temperature	Auto-ignition temperature: not determined
12.1		Aquatic toxicity (acute) of components of the mixture: change in the listing (table)
12.1		Aquatic toxicity (chronic) of components of the mixture: change in the listing (table)

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Section	Former entry (text/value)	Actual entry (text/value)
12.2	Persistence and degradability	Persistence and degradability: Data are not available.
12.2		Degradability of components of the mixture: change in the listing (table)
12.3		Bioaccumulative potential of components of the mixture: change in the listing (table)
12.5	Results of PBT and vPvB assessment: Dodecamethyl cyclohexasiloxane (D6) meets the current criteria for vPvB substances according to REACH Annex XIII. However, D6 does not behave like other known PBT / vPvB substances. The scientific evidence of field studies shows that D6 in the food web of water and land ecosystems does not lead to biomagnification. In air, D6 is degraded by reaction with naturally occurring hydroxyl radicals in the atmosphere. It is not expected that the air-borne D6, which is not degraded by reaction with hydroxyl radicals, passes from the air to water, land or living organisms.	Results of PBT and vPvB assessment: Does not contain any substances that are assessed to be a PBT or a vPvB >0.1%.
15.1	List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list	List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list: Not listed.
15.1		Substance of Very High Concern (SVHC): change in the listing (table)
16		Abbreviations and acronyms: change in the listing (table)

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer

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Abbr.	Descriptions of used abbreviations
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
SVHC	Substance of Very High Concern
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product. FRAGOL cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.