

# Safety Data Sheet

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

# FRAGOL

## FRAGOLTHERM X-T9-A

Version number: 3.0  
Replaces version of: 2020-05-07 (2)

Revision: 2021-04-23

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

#### 1.1 Product identifier

Trade name **FRAGOLTHERM X-T9-A**  
Registration number (REACH) not relevant (mixture)

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

Relevant identified uses Heat transfer fluid  
Cooling 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  
D-45481 Mülheim  
Germany

Telephone: +49 (0)208-300 02-50  
Telefax: +49 (0)208-300 02-33  
e-mail: htf@fragol.de  
Website: www.fragol.de

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

Poison centre		
Country	Name	Telephone
United Kingdom	National Poisons Information Service (NPIS) (medical professionals only)	0344-8920111
United Kingdom	NHS (general public)	non-emergency: 111 or a doctor; emergency: 999

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

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

Section	Hazard class	Category	Hazard class and category	Hazard statement
2.6	flammable liquid	3	Flam. Liq. 3	H226
4.1C	hazardous to the aquatic environment - chronic hazard	3	Aquatic Chronic 3	H412

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

The product is combustible and can be ignited by potential ignition sources. Spillage and fire water can cause pollution of water-courses.

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### Additional information

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

### 2.2 Label elements

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

- signal word Warning

- pictograms

GHS02



- hazard statements

H226

Flammable liquid and vapour.

H412

Harmful to aquatic life with long lasting effects.

- precautionary statements

P210

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

P233

Keep container tightly closed.

P273

Avoid release to the environment.

P303+P361+P353

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P370+P378

In case of fire: Use carbon dioxide, powder extinguisher, water spray or alcohol resistant foam to extinguish.

P403+P235

Store in a well-ventilated place. Keep cool.

P501

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

### 2.3 Other hazards

Special danger of slipping by leaking/spilling product.

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Not relevant (mixture)

### 3.2 Mixtures

The product does not contain any other ingredients which are classified according to present knowledge of the supplier and contribute to the classification of the product and hence require reporting in this section.

Description of the mixture

Polysiloxanes Mixture

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
Octamethyltrisiloxane	CAS No 107-51-7  EC No 203-497-4  REACH Reg. No 01-2119970219- 31-xxxx	50 – < 75	Flam. Liq. 3 / H226		

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Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
Decamethyltetrasiloxane	CAS No 141-62-8  EC No 205-491-7  REACH Reg. No 01-2119970214- 41-xxxx	10 – < 25	Flam. Liq. 3 / H226		
hexamethyldisiloxane; hexamethyloxydisilane	CAS No 107-46-0  EC No 203-492-7  REACH Reg. No 01-2119496108- 31-xxxx	1 – < 5	Flam. Liq. 2 / H225 Aquatic Acute 1 / H400 Aquatic Chronic 2 / H411	 	

Name of substance	Identifier	Specific Conc. Limits	M-Factors	ATE	Exposure route
Octamethyl-trisiloxane	CAS No 107-51-7  EC No 203-497-4	-	M-factor (acute) = 100.0	-	
Decamethyltetrasiloxane	CAS No 141-62-8  EC No 205-491-7	-	M-factor (acute) = 100.0 M-factor (chronic) = 10.0	-	
hexamethyldisiloxane; hexamethyloxydisilane	CAS No 107-46-0  EC No 203-492-7	-	-	16 mg/kg	oral

### Remarks

For full text of Hazard- and EU Hazard-statements: see SECTION 16.

## 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. In case of unconsciousness place person in the recovery position. Never give anything by mouth. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice.

#### Following inhalation

Provide fresh air. If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician.

#### Following skin contact

Take off contaminated clothing. After contact with skin, wash immediately with plenty of water and soap. In all cases of doubt, or when symptoms persist, seek medical advice.

#### Following eye contact

Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

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### Following ingestion

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. In all cases of doubt, or when symptoms persist, seek medical advice.

### 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. For specialist advice physicians should contact the poison centre.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Water spray, Alcohol resistant foam, Dry extinguishing powder, Carbon dioxide (CO<sub>2</sub>),  
Co-ordinate firefighting measures to the fire surroundings

#### Unsuitable extinguishing media

Water jet.

### 5.2 Special hazards arising from the substance or mixture

In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air mixture. Solvent vapours are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures.

#### Hazardous combustion products

During fire hazardous fumes/smoke could be produced.

### 5.3 Advice for firefighters

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. If substance has entered a water course or sewer, inform the responsible authority.

### 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.

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### 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. Avoidance of ignition sources. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Use only in well-ventilated areas. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

- specific notes/details

Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapours are heavier than air, spread along floors and form explosive mixtures with air.

#### 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

- explosive atmospheres

Keep container tightly closed and in a well-ventilated place. Use local and general ventilation. Keep cool. Protect from sunlight.

- flammability hazards

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

- incompatible substances or mixtures

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

#### 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.

- ventilation requirements

Use local and general ventilation. Ground/bond container and receiving equipment.

- packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

### 7.3 Specific end use(s)

There is no additional information.

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### 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. When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. 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.

##### - type of material

PVC: polyvinyl chloride. NBR: acrylonitrile-butadiene rubber. PVA: polyvinyl alcohol. IIR: isobutene-isoprene (butyl) rubber. NP: neoprene. Nitrile rubber. Viton®.

##### - 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: >480 minutes (permeation: level 6).

##### - other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling. Provide eyewash stations and safety showers at the workplace.

##### 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.

##### Environmental exposure controls

Take appropriate precautions to avoid uncontrolled release into the environment. Keep away from drains, surface and ground water.

### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	colourless
Odour	characteristic
Melting point/freezing point	<-140 °C calculated value, referring to a component of the mixture

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Boiling point or initial boiling point and boiling range	>150 °C (Supplier)
Flammability	not relevant (fluid)
Lower and upper explosion limit	LEL: 0.68 vol% UEL: 26 vol% calculated value, referring to a component of the mixture
Flash point	>32 - <60 °C calculated value, referring to a component of the mixture
Auto-ignition temperature	not determined
Decomposition temperature	no data available
pH (value)	not determined
Kinematic viscosity	1.1 mm <sup>2</sup> /s at 25 °C calculated value, referring to a component of the mixture

### Solubility(ies)

Water solubility	insoluble
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Partition coefficient n-octanol/water (log value)	this information is not available
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Vapour pressure	not determined
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Density	0.85 g/cm <sup>3</sup> at 25 °C calculated value, referring to a component of the mixture
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Particle characteristics	not relevant (liquid)
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### 9.2 Other information

Information with regard to physical hazard classes	there is no additional information
Other safety characteristics	there is no additional information

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

The mixture contains reactive substance(s). Risk of ignition.

If heated:

Risk of ignition.

### 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

Oxidisers. Acids.

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### 10.4 Conditions to avoid

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

#### Hints to prevent fire or explosion

Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

### 10.5 Incompatible materials

Oxidisers. Reducing agents.

### 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 hazard classes as defined in Regulation (EC) No 1272/2008

Test data are not available for the complete mixture.

#### Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

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

##### Acute toxicity

Shall not be classified as acutely toxic.

- acute toxicity of components of the mixture

Acute toxicity estimate (ATE) of components of the mixture			
Name of substance	CAS No	Exposure route	ATE
hexamethyldisiloxane; hexamethoxydisilane	107-46-0	oral	16 mg/kg

##### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

##### Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

##### 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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### 11.2 Information on other hazards

There is no additional information.

## SECTION 12: Ecological information

### 12.1 Toxicity

Harmful to aquatic life with long lasting effects.

### 12.2 Persistence and degradability

Not readily biodegradable.

### 12.3 Bioaccumulative potential

### 12.4 Mobility in soil

Data are not available.

### 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

### 12.6 Endocrine disrupting properties

None of the ingredients are listed.

### 12.7 Other adverse effects

Data are not available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Waste treatment-relevant information

Solvent reclamation/regeneration.

Sewage disposal-relevant information

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

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. 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 or ID number

ADR/RID/ADN UN 1993

IMDG-Code UN 1993

ICAO-TI UN 1993

### 14.2 UN proper shipping name

ADR/RID/ADN FLAMMABLE LIQUID, N.O.S.

IMDG-Code FLAMMABLE LIQUID, N.O.S.

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ICAO-TI	Flammable liquid, n.o.s.
Technical name (Hazardous ingredients)	Octamethyltrisiloxane, Decamethyltetrasiloxane
<b>14.3 Transport hazard class(es)</b>	
ADR/RID/ADN	3
IMDG-Code	3
ICAO-TI	3
<b>14.4 Packing group</b>	
ADR/RID/ADN	III
IMDG-Code	III
ICAO-TI	III
<b>14.5 Environmental hazards</b>	non-environmentally hazardous acc. to the dangerous goods regulations
<b>14.6 Special precautions for user</b>	
Provisions for dangerous goods (ADR) should be complied within the premises.	
<b>14.7 Maritime transport in bulk according to IMO instruments</b>	
Not applicable.	

### Information for each of the UN Model Regulations

#### **Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - additional information**

Classification code	F1
Danger label(s)	3
	
Special provisions (SP)	274, 601
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
Transport category (TC)	3
Tunnel restriction code (TRC)	(D/E)
Hazard identification No	30
Emergency Action Code	3Y

#### **International Maritime Dangerous Goods Code (IMDG) - additional information**

Marine pollutant	-
Danger label(s)	3
	
Special provisions (SP)	223, 274, 955
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
EmS	F-E, <u>S-E</u>
Stowage category	A

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### International Civil Aviation Organization (ICAO-IATA/DGR) - additional information

Danger label(s)	3
	
Special provisions (SP)	A3
Excepted quantities (EQ)	E1
Limited quantities (LQ)	10 L

### 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

Name	Name acc. to inventory	Restriction	No
FRAGOL THERM X-T9-A	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC	R3	3
Octamethyltrisiloxane	flammable / pyrophoric	R40	40
hexamethyldisiloxane; hexamethyloxydisilane	flammable / pyrophoric	R40	40
Decamethyltetrasiloxane	flammable / pyrophoric	R40	40

##### Legend

R3

- Shall not be used in:
  - ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ash-trays,
  - tricks and jokes,
  - games for one or more participants, or any article intended to be used as such, even with ornamental aspects,
- Articles not complying with paragraph 1 shall not be placed on the market.
- Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:
  - can be used as fuel in decorative oil lamps for supply to the general public, and,
  - present an aspiration hazard and are labelled with R65 or H304,
- Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).
- Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:
  - lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: 'Keep lamps filled with this liquid out of the reach of children'; and, by 1 December 2010, 'Just a sip of lamp oil - or even sucking the wick of lamps - may lead to life-threatening lung damage';
  - grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: 'Just a sip of grill lighter may lead to life threatening lung damage';
  - lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.
- No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public.
- Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.

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### Legend

R40

1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following:
  - metallic glitter intended mainly for decoration,
  - artificial snow and frost,
  - 'whoopee' cushions,
  - silly string aerosols,
  - imitation excrement,
  - horns for parties,
  - decorative flakes and foams,
  - artificial cobwebs,
  - stink bombs.
2. Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with:  
'For professional users only'.
3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/324/EEC (2).
4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated.

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

None of the ingredients are listed.

### 15.2 Chemical Safety Assessment

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

## SECTION 16: Other information

### Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)
1.2	Relevant identified uses: Professional use Industrial use	Relevant identified uses: Heat transfer fluid Cooling fluid Professional use Industrial use
2.1		Classification according to Regulation (EC) No 1272/2008 (CLP): change in the listing (table)
2.1	The most important adverse physicochemical, human health and environmental effects: The product is combustible and can be ignited by potential ignition sources. The mixture contains a substance that was identified as a PBT (persistent, bioaccumulative and toxic). The mixture contains a substance that was identified as vPvB (very persistent and very bioaccumulative).	The most important adverse physicochemical, human health and environmental effects: The product is combustible and can be ignited by potential ignition sources. Spillage and fire water can cause pollution of watercourses.
2.1		Additional information: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
2.2		- hazard statements: change in the listing (table)
2.2		- precautionary statements: change in the listing (table)
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: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
3.2		Description of the mixture: change in the listing (table)
3.2		Description of the mixture: change in the listing (table)

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Section	Former entry (text/value)	Actual entry (text/value)
4.1	Following skin contact: Take off contaminated clothing. After contact with skin, wash immediately with plenty of water and soap.	Following skin contact: Take off contaminated clothing. After contact with skin, wash immediately with plenty of water and soap. In all cases of doubt, or when symptoms persist, seek medical advice.
4.1	Following ingestion: Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting.	Following ingestion: Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. In all cases of doubt, or when symptoms persist, seek medical advice.
5.1	Suitable extinguishing media: Water spray, Alcohol resistant foam, Dry extinguishing powder, Carbon dioxide (CO <sub>2</sub> )	Suitable extinguishing media: Water spray, Alcohol resistant foam, Dry extinguishing powder, Carbon dioxide (CO <sub>2</sub> ), Co-ordinate firefighting measures to the fire surroundings
6.2	Environmental precautions: Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.	Environmental precautions: Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.
7.1	Specific notes/details: Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapours are heavier than air, spread along floors and form explosive mixtures with air. Vapours may form explosive mixtures with air.	Specific notes/details: Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapours are heavier than air, spread along floors and form explosive mixtures with air.
8.2	- other protection measures: Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.	- other protection measures: Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling. Provide eye-wash stations and safety showers at the workplace.
8.2	Environmental exposure controls: Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.	Environmental exposure controls: Take appropriate precautions to avoid uncontrolled release into the environment. Keep away from drains, surface and ground water.
9.1	Appearance	
9.1	Other safety parameters	
9.1		Lower and upper explosion limit: LEL: 0.68 vol% UEL: 26 vol% calculated value, referring to a component of the mixture
9.1	Evaporation rate: not determined	
9.1		Decomposition temperature: no data available
9.1	Vapour density: this information is not available	
9.1	Partition coefficient	
9.1	Viscosity	
9.1	Explosive properties: none	
9.1	Oxidising properties: none	
9.1		Particle characteristics: not relevant (liquid)

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Section	Former entry (text/value)	Actual entry (text/value)
9.2	Other information: There is no additional information.	Other information
9.2		Information with regard to physical hazard classes: there is no additional information
9.2		Other safety characteristics: there is no additional information
10.2	Chemical stability: See below "Conditions to avoid".	Chemical stability: The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
11.1		Acute toxicity of components of the mixture
11.1		Acute toxicity estimate (ATE) of components of the mixture: change in the listing (table)
11.2		Information on other hazards: There is no additional information.
12.1	Toxicity: Shall not be classified as hazardous to the aquatic environment.	Toxicity: Harmful to aquatic life with long lasting effects.
12.3	Bioaccumulative potential: The substance fulfils the very bioaccumulative criterion.	bioaccumulative potential
12.5	Results of PBT and vPvB assessment: The mixture contains a substance that was identified as a PBT (persistent, bioaccumulative and toxic). The mixture contains a substance that was identified as vPvB (very persistent and very bioaccumulative).	Results of PBT and vPvB assessment: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
14.1	UN number: 1993	UN number or ID number
14.1		ADR/RID/ADN: UN 1993
14.1		IMDG-Code: UN 1993
14.1		ICAO-TI: UN 1993
14.2	UN proper shipping name: FLAMMABLE LIQUID, N.O.S.	UN proper shipping name
14.2		ADR/RID/ADN: FLAMMABLE LIQUID, N.O.S.
14.2		IMDG-Code: FLAMMABLE LIQUID, N.O.S.
14.2		ICAO-TI: Flammable liquid, n.o.s.
14.2	Technical name (Hazardous ingredients): Hexamethyldisiloxane	Technical name (Hazardous ingredients): Octamethyltrisiloxane, Decamethyltetrasiloxane
14.3	Class: 3 (flammable liquids)	
14.3		ADR/RID/ADN: 3
14.3		IMDG-Code: 3

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Section	Former entry (text/value)	Actual entry (text/value)
14.3		ICAO-TI: 3
14.4	Packing group: III (substance presenting low danger)	Packing group
14.4		ADR/RID/ADN: III
14.4		IMDG-Code: III
14.4		ICAO-TI: III
14.7	UN number: 1993	
14.7	Proper shipping name: FLAMMABLE LIQUID, N.O.S.	
14.7	Class: 3	
14.7	Packing group: III	
14.7	UN number: 1993	
14.7	Proper shipping name: FLAMMABLE LIQUID, N.O.S.	
14.7	Class: 3	
14.7	Packing group: III	
14.7	UN number: 1993	
14.7	Proper shipping name: Flammable liquid, n.o.s.	
14.7	Class: 3	
14.7	Packing group: III	
15.1		Restrictions according to REACH, Annex XVII: change in the listing (table)
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: None of the ingredients are listed.
15.1		Substance of Very High Concern (SVHC): change in the listing (table)
16		Abbreviations and acronyms: change in the listing (table)
16	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).	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 2020/878/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).

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Section	Former entry (text/value)	Actual entry (text/value)
16		List of relevant phrases (code and full text as stated in chapter 2 and 3): 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)
ADR/RID/ADN	European Agreements concerning the International Carriage of Dangerous Goods by Road/Rail/Inland Waterways (ADR/RID/ADN)
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
ATE	Acute Toxicity Estimate
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
EmS	Emergency Schedule
Flam. Liq.	Flammable liquid
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
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
LEL	Lower explosion limit (LEL)
M-factor	Means a multiplying factor. It is applied to the concentration of a substance classified as hazardous to the aquatic environment acute category 1 or chronic category 1, and is used to derive by the summation method the classification of a mixture in which the substance is present
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic



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Abbr.	Descriptions of used abbreviations
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
UEL	Upper explosion limit (UEL)
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 2020/878/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).

### Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

### List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

### 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.