

Safety Data Sheet

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

FRAGOL

FRAGOLTHERM W-PGA

Version number: 1.0

Date of compilation: Revision: 2019-04-30

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

1.1 Product identifier

Trade name **FRAGOLTHERM W-PGA**
Registration number (REACH) not relevant (mixture)

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

Relevant identified uses Coolant
Anti-freeze product

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

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

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

Code	Supplemental hazard information
EUH210	safety data sheet available on request

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 Not required.

- pictograms Not required.

- supplemental hazard information

EUH210 Safety data sheet available on request.

2.3 Other hazards

There is no additional information. 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.

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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 substance and hence require reporting in this section.

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes	Specific Conc. Limits	M-Factors
Sodium 2-ethylhexanoate	CAS No 19766-89-3 EC No 243-283-8	0.1 – <3	Repr. 2 / H361		RE1		

Notes

RE1: Exempted from registration in accordance with Annex V to Regulation 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)

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

Exposure may cause short-term irritation, redness or malaise.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically. For specialist advice physicians should contact the poison centre. Observe aspiration hazard if vomiting occurs.

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.

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5.2 Special hazards arising from the substance or mixture

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. Keep away from sources of ignition - No smoking.

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

Advices on how to contain a spill

Covering of drains.

Advices on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage. Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.).

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. Use only in well-ventilated areas. Take precautionary measures against static discharge. In use, may form flammable/explosive vapour-air mixture.

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

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Managing of associated risks

- flammability hazards

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

- incompatible substances or mixtures

Observe hints for combined storage.

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)

Anti-freeze product / Coolant

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)									
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]	Notation	Source
GB	propane-1,2-diol	57-55-6	WEL		10			particle	EH40/2005
GB	propane-1,2-diol	57-55-6	WEL	150	474			vp	EH40/2005

Notation

particle

as airborne particles

STEL

short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA

time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

vp

as vapours and particulates

Relevant DNELs/DMELs/PNECs and other threshold levels

Relevant DNELs of components of the mixture						
Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Propane-1,2-diol	57-55-6	DNEL	168 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Propane-1,2-diol	57-55-6	DNEL	10 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
Propane-1,2-diol	57-55-6	DNEL	50 mg/m ³	human, inhalatory	consumer (private households)	chronic - systemic effects
Propane-1,2-diol	57-55-6	DNEL	10 mg/m ³	human, inhalatory	consumer (private households)	chronic - local effects
Sodium 2-ethylhexanoate	19766-89-3	DNEL	14 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Sodium 2-ethylhexanoate	19766-89-3	DNEL	2 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
Sodium 2-ethylhexanoate	19766-89-3	DNEL	3.5 mg/m ³	human, inhalatory	consumer (private households)	chronic - systemic effects

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Relevant DNELs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Sodium 2-ethylhexanoate	19766-89-3	DNEL	1 mg/kg	human, dermal	consumer (private households)	chronic - systemic effects
Sodium 2-ethylhexanoate	19766-89-3	DNEL	1 mg/kg	human, oral	consumer (private households)	chronic - systemic effects

Relevant PNECs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Propane-1,2-diol	57-55-6	PNEC	183 mg/l	aquatic organisms	water	intermittent release
Propane-1,2-diol	57-55-6	PNEC	260 mg/l	aquatic organisms	freshwater	short-term (single instance)
Propane-1,2-diol	57-55-6	PNEC	26 mg/l	aquatic organisms	marine water	short-term (single instance)
Propane-1,2-diol	57-55-6	PNEC	20,000 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Propane-1,2-diol	57-55-6	PNEC	572 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Propane-1,2-diol	57-55-6	PNEC	57.2 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Propane-1,2-diol	57-55-6	PNEC	50 mg/kg	terrestrial organisms	soil	short-term (single instance)
Sodium 2-ethylhexanoate	19766-89-3	PNEC	0.36 mg/l	aquatic organisms	freshwater	short-term (single instance)
Sodium 2-ethylhexanoate	19766-89-3	PNEC	0.036 mg/l	aquatic organisms	marine water	short-term (single instance)
Sodium 2-ethylhexanoate	19766-89-3	PNEC	0.493 mg/l	aquatic organisms	water	intermittent release
Sodium 2-ethylhexanoate	19766-89-3	PNEC	71.7 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Sodium 2-ethylhexanoate	19766-89-3	PNEC	0.301 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Sodium 2-ethylhexanoate	19766-89-3	PNEC	0.03 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Sodium 2-ethylhexanoate	19766-89-3	PNEC	0.058 mg/kg	terrestrial organisms	soil	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Use safety goggle with side protection (EN 166).

Skin protection

Protective clothing (EN 340 & EN ISO 13688).

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- 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. NR: natural rubber, latex. Nitrile.

- material thickness

use gloves with a minimum material thickness: > 0,4 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.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

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	greenish-blue
Odour	mild

Other safety parameters

pH (value)	8.7 (water: 0.5 mg/cm ³ , 20 °C)
Melting point/freezing point	not determined
Initial boiling point and boiling range	170 °C at 1,013 hPa
Flash point	103 °C (Supplier)
Evaporation rate	not determined
Flammability (solid, gas)	not relevant (fluid)
Explosive limits	not determined
Vapour pressure	not determined
Density	1.042 kg/l at 20 °C (Supplier)
Vapour density	this information is not available

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Solubility(ies)

- water solubility	miscible in any proportion
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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	not determined
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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.

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

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

Vapours are heavier than air, spread along floors and form explosive mixtures with air.

10.4 Conditions to avoid

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

Physical stresses which might result in a hazardous situation and have to be avoided:

Strong shocks

10.5 Incompatible materials

Acids. Oxidisers. Peroxides. Chlorates. Nitrates.

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

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)

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

Acute toxicity

Shall not be classified as acutely toxic.

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Acute toxicity			
Exposure route	Endpoint	Value	Species
oral	LD50	>2,000 mg/kg	not specified

- acute toxicity of components of the mixture

Acute toxicity of components of the mixture					
Name of substance	CAS No	Exposure route	Endpoint	Value	Species
Sodium 2-ethylhexanoate	19766-89-3	oral	LD50	2,043 mg/kg	rat
Sodium 2-ethylhexanoate	19766-89-3	dermal	LD50	>2,000 mg/kg	rat

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.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Sodium 2-ethylhexanoate	19766-89-3	LC50	>100 mg/l	fish	96 h
Sodium 2-ethylhexanoate	19766-89-3	ErC50	49.3 mg/l	algae	72 h
Sodium 2-ethylhexanoate	19766-89-3	growth rate (ErCx) 10%	32 mg/l	algae	72 h

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Aquatic toxicity (chronic) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Sodium 2-ethylhexanoate	19766-89-3	EC50	75 mg/l	aquatic invertebrates	21 d
Sodium 2-ethylhexanoate	19766-89-3	NOEC	25 mg/l	aquatic invertebrates	21 d
Sodium 2-ethylhexanoate	19766-89-3	LOEC	63 mg/l	aquatic invertebrates	21 d
Sodium 2-ethylhexanoate	19766-89-3	growth (EbCx) 10%	71.7 mg/l	microorganisms	17 h

12.2 Persistence and degradability

Probably readily biodegradable.

12.3 Bioaccumulative potential

No potential for bioaccumulation.

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 Other adverse effects

Data are not available.

Endocrine disrupting potential

None of the ingredients are 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

For this product, no waste code number can be defined according to the European Waste List (EAK), as only the intended use by the consumer permits allocation. The waste code number shall be determined in accordance with the European waste list (Commission Decisions 200/532 / EC and 2001/118 / EC) in consultation with the waste disposal / manufacturer / authority

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.

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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.

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
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

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)
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/)

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Abbr.	Descriptions of used abbreviations
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
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
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
Repr.	Reproductive toxicity
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
STEL	Short-term exposure limit
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

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).

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
H361	Suspected of damaging fertility or the unborn child.

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.