

FRAGOLTHERM F-N

Version number: 1.0

Date of compilation: 2018-05-04

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Identification of the substance	Benzene, mono-C10-13-alkyl derivs., distn. residues
Trade name	FRAGOLTHERM F-N
Registration number (REACH)	01-2119485843-26-xxxx
EC number	284-660-7
CAS number	84961-70-6

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

Relevant identified uses	Professional use Industrial use Heat transfer fluid
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

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
3.10	aspiration hazard	1	Asp. Tox. 1	H304

For full text of abbreviations: see SECTION 16.

2.2 Label elements

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

- signal word danger

- pictograms

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GHS08

**- hazard statements**

H304 May be fatal if swallowed and enters airways.

- precautionary statements

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P331 Do NOT induce vomiting.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

Of no significance.

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

SECTION 3: Composition/information on ingredients**3.1 Substances**

Name of substance	Benzene, mono-C10-13-alkyl derivs., distrn. residues
Identifiers	
REACH Reg. No	01-2119485843-26-xxxx
CAS No	84961-70-6
EC No	284-660-7

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.

Following skin contact

Wash with plenty of soap and water.

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.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Call a POISON CENTER or doctor if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Pulmonary oedema. Aspiration hazard.

4.3 Indication of any immediate medical attention and special treatment needed

For specialist advice physicians should contact the poison centre.

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SECTION 5: Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing media

Dry extinguishing powder; Carbon dioxide (CO₂); Foam

Unsuitable extinguishing media

Water jet.

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. Special danger of slipping by leaking/spilling product.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases. Use personal protective equipment as required.

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).

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.

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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.

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 oxidising substances. acids. Alkalines.

Control of effects

Protect against external exposure, such as

High temperatures. UV-radiation/sunlight.

Consideration of other advice

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

7.3 Specific end use(s)

Heat transfer fluids.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****National limit values**

No information available.

Relevant DNELs/DMELs/PNECs and other threshold levels

Relevant DNELs and other threshold levels				
Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	8.6 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

Relevant PNECs and other threshold levels				
Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
PNEC	0.000075 mg/l	not specified	freshwater	not specified
PNEC	0.000075 mg/cm ³	not specified	marine water	not specified
PNEC	0.001 mg/l	not specified	freshwater	intermittent release
PNEC	2 mg/l	not specified	sewage treatment plant (STP)	not specified
PNEC	1,761 mg/cm ³	not specified	freshwater sediment	not specified
PNEC	1,761 mg/cm ³	not specified	marine sediment	not specified

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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).

- hand protection



Wear suitable gloves. Check leak-tightness/impermeability prior to use. 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. Chemical protection gloves are suitable, which are tested according to EN 374. 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

CR: chloroprene (chlorobutadiene) rubber, Nitrile rubber

- 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. Type: A-P2 (combined filters against particles and organic gases and vapours, colour code: Brown/White). Type: ABEK-P2 (combined filters against gases, vapours and particles, colour code: Brown/Grey/Yellow/Green/White).

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	yellow
Odour	characteristic

Other safety parameters

pH (value)	not determined
Melting point/freezing point	not determined
Initial boiling point and boiling range	348 °C
Flash point	181 °C (ASTM D 93)

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Evaporation rate	not determined
Flammability (solid, gas)	not relevant (fluid)
Explosive limits	not determined
Vapour pressure	not determined
Density	874 kg/m ³
Vapour density	this information is not available
Solubility(ies)	not determined

Partition coefficient

- n-octanol/water (log KOW)	9.9 (25 °C) (ECHA)
- soil organic carbon/water (log KOC)	8.432 (ECHA)

Auto-ignition temperature	not determined
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Viscosity

- kinematic viscosity	16.5 mm ² /s at 40 °C
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Explosive properties	none
Oxidising properties	none

9.2 Other information

Pour point	< -45 °C
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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

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Keep away from heat.

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.

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SECTION 11: Toxicological information**11.1 Information on toxicological effects****Classification according to GHS (1272/2008/EC, CLP)**

Acute toxicity

Shall not be classified as acutely toxic.

Acute toxicity				
Exposure route	Endpoint	Value	Species	Method
oral	LD50	>2,000 mg/kg	rat	
dermal	LD50	>3,600 mg/kg	rat	

Skin corrosion/irritation

Has degreasing effect on the skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant. Irritation and significant inflammation of the skin (dermatitis) due to the defatting properties of the product may be caused by repeated or prolonged exposure.

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

May be fatal if swallowed and enters airways.

Additional test results

Exposure route	Endpoint	Value	Exposure time	Species	Method	Notes
oral	NOAEL	50 mg/kg bw/day		rat	two-generation reproduction toxicity study	NOAEL (parents): 50 (mg/kg bw/day). NOAEL (F1): 50 (mg/kg bw/day). NOAEL (F2): 50 (mg/kg bw/day).
oral	NOAEL	500 mg/kg bw/day		rat	combined repeated dose toxicity study with the reproduction/developmental toxicity screening test	LOAEL 1000 (mg/kg bw/day) reference: Benzene, mono-C12-14-alkyl derivs., fractionation bottoms.

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Exposure route	Endpoint	Value	Exposure time	Species	Method	Notes
oral	NOAEL	1,600 mg/kg	20 d	rat	prenatal development toxicity study	NOAEL (dam): 400 (mg/kg bw/day).

Other information

May cause respiratory tract irritation when present in a form of oil mist or vapors at high temperatures.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute)			
Endpoint	Value	Species	Exposure time
EC50	>1.4 mg/l	aquatic invertebrates	48 h
EbC50	>2.08 mg/l	algae	72 h
ErC50	>2.08 mg/l	algae	72 h
NOEC	1.4 mg/l	aquatic invertebrates	48 h
NOEC	≥2.08 mg/l	algae	72 h

Aquatic toxicity (chronic)			
Endpoint	Value	Species	Exposure time
EL50	>10 mg/l	aquatic invertebrates	21 d
EC50	0.012 mg/l	aquatic invertebrates	21 d

12.2 Persistence and degradability

Not readily biodegradable.

12.3 Bioaccumulative potential

n-octanol/water (log KOW)	9.9 (25 °C) (ECHA)
BCF	35 (ECHA)

12.4 Mobility in soil

Data are not available.

The Organic Carbon normalised adsorption coefficient	8.432 (ECHA)
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12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

12.6 Other adverse effects

Data are not available.

Endocrine disrupting potential

Not listed.

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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

Completely emptied packages can be recycled. 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

13 03 08x Synthetic insulating and heat transmission oils

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 relevant
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	No data available.

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)**
- List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list**
- Not listed. None of the ingredients are listed.
- Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)**
- Not listed.

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Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

Not listed.

Regulation 98/2013/EU on the marketing and use of explosives precursors

Not listed.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance 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)
BCF	Bioconcentration factor
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
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.

Safety Data Sheet

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

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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).

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

Code	Text
H304	May be fatal if swallowed and enters airways.

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.