

Safety Data Sheet

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

FRAGOL

FRAGOLTHERM HT

Version number: 3.0
Replaces version of: 2020-11-03 (2)

Revision: 2021-04-15

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

1.1 Product identifier

Trade name	FRAGOLTHERM HT
Identification of the substance	Dibenzylbenzene, ar-methyl derivative
Registration number (REACH)	01-2119488667-17-xxxx
EC number	258-649-2
CAS number	53585-53-8

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
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
3.7	reproductive toxicity	1B	Repr. 1B	H360FD
3.10	aspiration hazard	1	Asp. Tox. 1	H304
4.1C	hazardous to the aquatic environment - chronic hazard	1	Aquatic Chronic 1	H410

For full text of abbreviations: see SECTION 16.

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The most important adverse physicochemical, human health and environmental effects

Spillage and fire water can cause pollution of watercourses.

Additional information

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

2.2 Label elements

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

- signal word Danger

- pictograms

GHS08, GHS09



- hazard statements

H304 May be fatal if swallowed and enters airways.
H360FD May damage fertility. May damage the unborn child (if swallowed).
H410 Very toxic to aquatic life with long lasting effects.

- precautionary statements

P201 Obtain special instructions before use.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P308+P313 IF exposed or concerned: Get medical advice/attention.
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

Repeated exposure may cause skin dryness or cracking. During use at elevated temperatures, low boiling and high boiling secondary products (e.g., hydrocarbons) are formed.

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 Dibenzylbenzene, ar-methyl derivative

Identifiers

REACH Reg. No 01-2119488667-17-xxxx

CAS No 53585-53-8

EC No 258-649-2

Specific Conc. Limits	M-Factors	ATE	Exposure route
	M-factor (acute) = 1.0 M-factor (chronic) = 10.0		

Molecular formula C₂₁H₂₀

Molar mass 272.4 g/mol

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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. Take off contaminated clothing and wash it before reuse.

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 case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Following ingestion

Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

4.2 Most important symptoms and effects, both acute and delayed

Pulmonary oedema.

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

Foam, Dry extinguishing powder, Carbon dioxide (CO₂)

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. Carbon monoxide (CO). Carbon dioxide (CO₂). Benzene. Toluene.

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.

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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. Special danger of slipping by leaking/spilling product.

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

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. 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. Ground/bond container and receiving equipment.

- 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.

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- packaging compatibilities

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

7.3 Specific end use(s)

Heat transfer fluid.

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	0.259 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
DNEL	0.37 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
DNEL	64.4 µg/m ³	human, inhalatory	consumer (private households)	chronic - systemic effects
DNEL	0.185 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
DNEL	0.0185 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects

Relevant PNECs and other threshold levels				
Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
PNEC	0.028 µg/l	not specified	freshwater	not specified
PNEC	0.003 µg/l	not specified	marine water	not specified
PNEC	0.11 mg/kg	not specified	freshwater sediment	not specified
PNEC	0.11 mg/kg	not specified	marine sediment	not specified
PNEC	2 mg/kg	not specified	soil	not specified
PNEC	1,000 mg/l	not specified	sewage treatment plant (STP)	not specified

8.2 Exposure controls

Appropriate engineering controls

Open windows, door, to allow sufficient ventilation. If this is not possible employ a fan to increase air exchange. 10 or more air changes per hour are recommended in the workplace.

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). Footwear protecting against chemicals. Boots.

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- 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

FKM: fluoro-elastomer

- 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. Provide eyewash stations and safety showers at the workplace.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Breathing apparatus only in case of aerosol or mist formation. 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

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	colorless to slightly yellowish
Odour	characteristic
Pour point	-34 °C (ISO 3016)
Boiling point or initial boiling point and boiling range	not determined
Flammability	not relevant (fluid)
Lower and upper explosion limit	LEL: UEL: not determined
Flash point	200 °C (DIN EN ISO 2592)
Auto-ignition temperature	500 °C at 100 kPa (EU method A.15)
Decomposition temperature	no data available
pH (value)	not determined
Kinematic viscosity	16.96 cSt at 40 °C

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Solubility(ies)

Water solubility	insoluble
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Partition coefficient n-octanol/water (log value)	>6 (pH value: 7, 22 °C) (OECD Guideline 117)
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Soil organic carbon/water (log KOC)	≥3.548 – ≤5.578 (OECD Guideline 121)
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Vapour pressure	0.001 Pa at 20 °C (EU method A.4)
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Density	1.044 g/cm ³ at 20 °C
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Particle characteristics	not relevant (liquid)
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9.2 Other information

Information with regard to physical hazard classes	hazard classes acc. to GHS (physical hazards): not relevant
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Other safety characteristics	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

Dämpfe können mit Luft explosionsfähige Gemische bilden.

10.4 Conditions to avoid

UV-radiation/sunlight. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Static electricity.

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

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

Acute toxicity

Shall not be classified as acutely toxic.

Acute toxicity			
Exposure route	Endpoint	Value	Species
inhalation: vapour	LC50	>0.24 mg/l/1h	rat
oral	LD50	>5,000 mg/kg	rat
dermal	LD50	>2,000 mg/kg	rat

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin. May cause slight irritation. OECD Guideline 404.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant. OECD Guideline 405.

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

May damage the unborn child (if swallowed). May damage fertility (if swallowed).
Reproduction/developmental toxicity screening test. (OECD Guideline 421) NOAEL 250 mg/kg BW (P)
NOAL 250 mg/kg BW (F1)
NOAEL 80mg/kg BW (F2).
Prenatal development toxicity study. (OECD Guideline 414) NOAEL 75 mg/kg BW (oral, rab)
LOAEL 10 mg/kg BW (oral, rab).

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).

- the classification as a specific target organ toxicant is based on

Chronic (long-term) toxicity

Exposure route	Endpoint	Value	Exposure time	Species	Notes
oral	NOAEL	50 mg/kg	120 d	rat	
oral	LOAEL	500 mg/kg	120 d	rat	

Aspiration hazard

May be fatal if swallowed and enters airways.

11.2 Information on other hazards

There is no additional information.

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SECTION 12: Ecological information

12.1 Toxicity

Very toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute)			
Endpoint	Value	Species	Exposure time
LC0	$\geq 0.029 \text{ mg/l}$	aquatic invertebrates	48 h
LC50	$> 50 \text{ } \mu\text{g/l}$	fish	96 h
LC50	$> 20.6 \text{ } \mu\text{g/l}$	aquatic invertebrates	48 h
LC50	$> 0.029 \text{ mg/l}$	aquatic invertebrates	48 h
ErC50	$> 16 \text{ } \mu\text{g/l}$	algae	72 h
NOEC	$> 50 \text{ } \mu\text{g/l}$	fish	96 h
NOEC	$9 \text{ } \mu\text{g/l}$	aquatic invertebrates	48 h
NOEC	$> 16 \text{ } \mu\text{g/l}$	algae	72 h

Aquatic toxicity (chronic)			
Endpoint	Value	Species	Exposure time
NOEC	$> 0.46 \text{ mg/l}$	fish	14 d
NOEC	$1.4 \text{ } \mu\text{g/l}$	aquatic invertebrates	21 d
NOEC	0.03 mg/l	aquatic invertebrates	21 d
LOEC	0.1 mg/l	aquatic invertebrates	21 d
growth (EbCx) 10%	$> 1,000 \text{ mg/l}$	microorganisms	4.92 h

12.2 Persistence and degradability

Not readily biodegradable.

12.3 Bioaccumulative potential

Potentially bioaccumulative.

n-octanol/water (log KOW)	> 6 (pH value: 7, 22 °C) (OECD Guideline 117)
BCF	7,525

12.4 Mobility in soil

Soil organic carbon/water (log KOC): $\geq 3.548 - \leq 5.578$ (OECD Guideline 121)

12.5 Results of PBT and vPvB assessment

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

12.7 Other adverse effects

Data are not available.

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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

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

According to the European Waste Catalog (EWC), waste code numbers are not product-related but application-related. Waste code numbers should be issued by the waste disposer, if possible in consultation with the waste disposal authorities

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 3082
IMDG-Code	UN 3082
ICAO-TI	UN 3082

14.2 UN proper shipping name

ADR/RID/ADN	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
IMDG-Code	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
ICAO-TI	Environmentally hazardous substance, liquid, n.o.s.
Technical name	Dibenzylbenzene, ar-methyl derivative

14.3 Transport hazard class(es)

ADR/RID/ADN	9
IMDG-Code	9
ICAO-TI	9

14.4 Packing group

ADR/RID/ADN	III
IMDG-Code	III
ICAO-TI	III

14.5 Environmental hazards

hazardous to the aquatic environment

14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

Information for each of the UN Model Regulations

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

Classification code	M6
Danger label(s)	9, fish and tree
	
Environmental hazards	yes (hazardous to the aquatic environment)
Special provisions (SP)	274, 335, 375, 601
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
Transport category (TC)	3
Tunnel restriction code (TRC)	(-)
Hazard identification No	90
Emergency Action Code	3Z

International Maritime Dangerous Goods Code (IMDG) - additional information

Marine pollutant	yes (hazardous to the aquatic environment) (FRAGOL THERM HT)
Danger label(s)	9, fish and tree



Special provisions (SP)	274, 335, 969
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
EmS	F-A, S-F
Stowage category	A

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

Environmental hazards	yes (hazardous to the aquatic environment)
Danger label(s)	9, fish and tree



Special provisions (SP)	A97, A158, A197
Excepted quantities (EQ)	E1
Limited quantities (LQ)	30 kg

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	CAS No	Type of registration	No
Dibenzylbenzene, ar-methyl derivative	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		1907/2006/EC annex XVII	3

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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
E1	environmental hazards (hazardous to the aquatic environment, cat. 1)	100	200	56)

Notation

56) hazardous to the Aquatic Environment in category Acute 1 or Chronic 1

Water Framework Directive (WFD)

List of pollutants (WFD)				
Name of substance	Name acc. to inventory	CAS No	Listed in	Remarks
Dibenzylbenzene, ar-methyl derivative	Substances and preparations, or the breakdown products of such, which have been proved to possess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine-related functions in or via the aquatic environment		A)	

Legend

A) Indicative list of the main pollutants

15.2 Chemical Safety Assessment

For this substance a chemical safety assessment has been carried out.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)
3.1		EC No: change in the listing (table)
8.1		Relevant DNELs and other threshold levels: change in the listing (table)
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	Explosive limits: not determined	Lower and upper explosion limit: LEL: UEL: not determined

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Section	Former entry (text/value)	Actual entry (text/value)
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)
9.2	Other information: There is no additional information.	Other information
9.2		Information with regard to physical hazard classes: hazard classes acc. to GHS (physical hazards): not relevant
9.2		Other safety characteristics: there is no additional information
11.2		Information on other hazards: There is no additional information.
12.2	Persistence and degradability: Data are not available.	Persistence and degradability: Not readily biodegradable.
12.3	Bioaccumulative potential: The substance fulfils the very bioaccumulative criterion. The bioaccumulation potential is low.	Bioaccumulative potential: Potentially bioaccumulative.
12.3	BCF: 7,525 (ECHA)	BCF: 7,525
12.4	Mobility in soil: Weakly mobile.	Mobility in soil: Soil organic carbon/water (log KOC): $\geq 3.548 - \leq 5.578$ (OECD Guideline 121)
13.1	List of wastes, Decision 2000/532/EC on the list of waste: According to the European Waste Catalog (EWC), waste code numbers are not product-related but application-related. Waste code numbers should be issued by the consumer, if possible in consultation with the waste disposal authorities	List of wastes, Decision 2000/532/EC on the list of waste: According to the European Waste Catalog (EWC), waste code numbers are not product-related but application-related. Waste code numbers should be issued by the waste disposer, if possible in consultation with the waste disposal authorities
14.1	UN number: 3082	UN number or ID number
14.1		ADR/RID/ADN: UN 3082
14.1		IMDG-Code: UN 3082
14.1		ICAO-TI: UN 3082
14.2	UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	UN proper shipping name

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Section	Former entry (text/value)	Actual entry (text/value)
14.2		ADR/RID/ADN: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
14.2		IMDG-Code: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
14.2		ICAO-TI: Environmentally hazardous substance, liquid, n.o.s.
14.3	Class: 9 (environmentally hazardous)	
14.3		ADR/RID/ADN: 9
14.3		IMDG-Code: 9
14.3		ICAO-TI: 9
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: 3082	
14.7	Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	
14.7	Class: 9	
14.7	Packing group: III	
14.7	UN number: 3082	
14.7	Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	
14.7	Class: 9	
14.7	Packing group: III	
14.7	Marine pollutant: yes (hazardous to the aquatic environment)	Marine pollutant: yes (hazardous to the aquatic environment) (FRAGOL THERM HT)
14.7	UN number: 3082	
14.7	Proper shipping name: Environmentally hazardous substance, liquid, n.o.s.	

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Section	Former entry (text/value)	Actual entry (text/value)
14.7	Class: 9	
14.7	Packing group: III	
15.1		Restrictions according to REACH, Annex XVII: 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).

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)
ATE	Acute Toxicity Estimate
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
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
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

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Abbr.	Descriptions of used abbreviations
IMDG-Code	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
LEL	Lower explosion limit (LEL)
LOAEL	Lowest Observed Adverse Effect Level
LOEC	Lowest Observed Effect Concentration
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
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Concentration
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
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).

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.
H360FD	May damage fertility. May damage the unborn child (if swallowed).
H410	Very toxic 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.