

Safety Data Sheet

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

amended by 2020/878/EU

FRAGOL

FRAGOLTHERM HT

Version number: 7.0
Replaces version of: 02.07.2024 (6 1)

Revision: 09.10.2025

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 Industrial use Professional 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
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Country	Name	Telephone
Germany	Giftnotruf der Charité - Universitätsmedizin Berlin	+49 30 30 686 700 (24/7)

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
4.3	persistent, bioaccumulative and toxic/very persistent and very bioaccumulative	PBT	PBT/vPvB PBT	EUH440

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Section	Hazard class	Category	Hazard class and category	Hazard statement
4.3	persistent, bioaccumulative and toxic/very persistent and very bioaccumulative	vPvB	PBT/vPvB vPvB	EUH441

The most important adverse physicochemical, human health and environmental effects

Spillage and fire water can cause pollution of watercourses. The substance was identified as a PBT (persistent, bioaccumulative and toxic). The substance was identified as a vPvB (very persistent and very bioaccumulative).

2.2 Label elements

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

- signal word Danger

- pictograms

GHS08, GHS09



- hazard statements

EUH441 Strongly accumulates in the environment and living organisms including in humans.
H304 May be fatal if swallowed and enters airways.
H360FD May damage fertility. May damage the unborn child.
H410 Very toxic to aquatic life with long lasting effects.

- precautionary statements

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.
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

The substance was identified as a PBT (persistent, bioaccumulative and toxic). The substance was identified as a vPvB (very persistent and very bioaccumulative).

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical identity of the main constituent

"UVCB substance" (substance of unknown or variable composition)

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

Purity $\geq 98\%$

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Substance: Concentration limit, M-Factor, ATE

Specific Conc. Limits	M-Factors	ATE	Exposure route
-	M-factor (chronic) = 10	-	

Molecular formula

C₂₁H₂₀

Molar mass

272,4 g/mol

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

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap. If skin irritation or rash occurs: Get medical advice/attention.

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.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

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

For specialist advice physicians should contact the poison centre.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray; Dry extinguishing powder; Carbon dioxide (CO₂);
Co-ordinate firefighting measures to the fire surroundings.

Unsuitable extinguishing media

Water jet.

5.2 Special hazards arising from the substance or mixture

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. 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.

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. 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.

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.

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

- incompatible substances or mixtures

Keep away from alkalis, oxidising substances, acids.

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.

- packaging compatibilities

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

7.3 Specific end use(s)

Heat transfer fluid.

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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

Relevant DNELs and other threshold levels				
Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	0,66 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
DNEL	1,56 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
DNEL	0,12 mg/m ³	human, inhalatory	consumer (private households)	chronic - systemic effects
DNEL	0,56 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
DNEL	0,06 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	0,14 µg/l	aquatic organisms	freshwater	short-term (single instance)
PNEC	0,014 µg/l	aquatic organisms	marine water	short-term (single instance)
PNEC	1 g/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
PNEC	0,05 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
PNEC	0,005 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
PNEC	2 mg/kg	terrestrial organisms	soil	short-term (single instance)

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. Provide eyewash stations and safety showers at 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).

Hand protection



Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. 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. The selection of the suitable gloves does not only depend on the material, but also on other quality characteristics and varies from manufacturer to manufacturer. ATTENTION: Wearing mois-

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ture-proof gloves (occlusion) for longer than 4 hours is defined as a risk in Germany.

- breakthrough time of the glove material

Use gloves with a minimum breakthrough time 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. Full face mask/half mask/quarter mask (EN 136/140). Type: A-P2 (combined filters against particles and organic gases and vapours, colour code: Brown/White). 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 to yellow
Odour	characteristic
Melting point/freezing point	-38,5 – -32,8 °C
Boiling point or initial boiling point and boiling range	390,1 °C at 101 kPa
Flammability	non-combustible
Lower and upper explosion limit	LEL: UEL: not determined
Flash point	200 °C (determination of flash point - pensky-martens closed cup method)
Auto-ignition temperature	500 °C (auto-ignition temperature (liquids and gases))
Decomposition temperature	no data available
pH (value)	not determined
Kinematic viscosity	50,1 mm ² /s at 20 °C 17 mm ² /s at 40 °C

Solubility

Water solubility	18 µg/l at 20 °C not miscible in any proportion
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Partition coefficient n-octanol/water (log value)	>6 (pH value: ~7, 22 °C)
Soil organic carbon/water (log KOC)	≥3,548 – ≤5,578

Vapour pressure	0,001 Pa at 20 °C 0,002 Pa at 25 °C
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Density and/or relative density

Density	1,044 g/cm ³ at 20 °C
Relative vapour density	information on this property is not available

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
Other safety characteristics	there is no additional information

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

No known hazardous reactions.

10.4 Conditions to avoid

UV-radiation/sunlight. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Protect from moisture.

10.5 Incompatible materials

Oxidisers.

10.6 Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1 Information on 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
oral	LD50	>5.000 mg/kg	rat
dermal	LD50	>2.000 mg/kg	rat
dermal	LD50	>2.000 mg/kg	rabbit

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.

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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. May damage fertility.

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, rabbit).

LOAEL 10 mg/kg BW (oral, rabbit).

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.

11.2 Information on other hazards

Other information

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Acc. to 1272/2008/EC: Very toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute)			
Endpoint	Value	Species	Exposure time
ErC50	>9,23 µg/l	algae	72 h
LC50	>50 µg/l	zebra fish (Danio rerio)	96 h
EC50	>9,23 µg/l	marine algae	72 h
NOEC	50 µg/l	zebra fish (Danio rerio)	96 h

Aquatic toxicity (chronic)			
Endpoint	Value	Species	Exposure time
NOEC	5,5 µg/l	fathead minnow (Pimephales promelas)	32 d
LOEC	0,1 mg/l	daphnia magna	21 d
growth (EbCx) 10%	>1.000 mg/l	soil microorganisms	4,92 h

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

The substance fulfils the very bioaccumulative criterion.

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n-octanol/water (log KOW)	>6 (pH value: ~7, 22 °C)
BCF	7.525

12.4 Mobility in soil

The Organic Carbon normalised adsorption coefficient	$\geq 3,548 - \leq 5,578$
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12.5 Results of PBT and vPvB assessment

The substance was identified as a PBT (persistent, bioaccumulative and toxic). The substance was identified as a vPvB (very persistent and very bioaccumulative).

12.6 Endocrine disrupting properties

Information on this property is not available.

12.7 Other adverse effects

Data are not available.

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

No waste code number can be assigned for this product according to the European Waste Catalogue, as classification is only possible based on the intended use by the consumer. The waste code number must be assigned according to the European Waste Catalogue (Commission Decisions 200/532/EC and 2001/118/EC) in consultation with the regional waste disposal company.

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)

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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	
No data available.	

Additional 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	M6
Danger label(s)	9, fish and tree
 	
Environmental hazards	yes (hazardous to the aquatic environment)
Special provisions (SP)	274, 335, 375, 601, 650
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
Transport category (TC)	3
Tunnel restriction code (TRC)	-
Hazard identification No	90

International Maritime Dangerous Goods Code (IMDG) - additional information

Marine pollutant	yes (hazardous to the aquatic environment) (Dibenzylbenzene, ar-methyl derivative)
Danger label(s)	9, fish and tree
 	
Special provisions (SP)	274, 335, 375, 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

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Environmental hazards yes (hazardous to the aquatic environment)

Danger label(s) 9, fish and tree



Special provisions (SP) A97, A158, A197, A215

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	Restriction	No
Dibenzylbenzene, ar-methyl derivative	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC	R3	3

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 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 Union provisions relating to the classification, labelling and packaging of substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:
 - lamp oils, labelled with 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 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 fluid may lead to life threatening lung damage';
 - lamps oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.;

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

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

Not listed.

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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

Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors, amending Regulation (EC) No 1907/2006 and repealing Regulation (EU) No 98/2013

Not listed.

Regulation on persistent organic pollutants (POP)

Not listed.

National regulations (Germany)

Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (Ordinance on facilities for handling substances hazardous to water) (AwSV)

Wassergefährdungsklasse, WGK 3 highly hazardous to water
(water hazard class)

Index number 814

Technical instructions on air quality control (Germany)

Number	Group of substances	Class	Conc.	Mass flow	Mass concentration	Notation
5.2.5	organic substances	class I	≥ 25 wt%	0,1 kg/h	20 mg/m ³	3)
5.2.7.1.3	reproductive toxic substances		≥ 25 wt%			4)
5.2.7.2	readily degradable, highly accumulative and highly toxic organic substances		≥ 25 wt%			4)

Notation

- 3) a total mass flow of 0.50 kg/h or a total mass concentration of 50 mg/m³, each of which to be indicated as total carbon, shall not be exceeded (except organic particulate matter)
- 4) in compliance with the emission reduction dictate

Storage of hazardous substances in non-stationary containers (TRGS 510) (Germany)

Storage class (LGK) 6.1 D (non-combustible substances of acute toxicity, category 3 (PG III) or hazardous substances that are toxic or produce chronic effects)

Chemikalien-Verbotsverordnung (Chemicals Prohibition Ordinance) - ChemVerbotsV

Anforderungen in Bezug auf die Abgabe		
Name acc. to inventory	Anforderungen	Erleichterte Anforderungen
Produkt mit GHS08 und Signalwort "Gefahr", H340, H350, H350i, H360, H360F, H360D, H360FD, H360Fd, H360Df, H370 oder H372	A1	EA1

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Legend

- A1
1. Erlaubnispflicht nach § 6 Absatz 1 Satz 1
 2. Grundanforderungen zur Durchführung der Abgabe nach § 8 Absatz 1, 3 und 4
 3. Identitätsfeststellung und Dokumentation nach § 9 Absatz 1 bis 3
 4. Ausschluss des Versandweges nach § 10
- EA1
1. Anzeigepflicht nach § 7 Absatz 1 Satz 1
 2. Grundanforderungen zur Durchführung der Abgabe nach § 8 Absatz 2 bis 4
 3. Identitätsfeststellung und Dokumentation nach § 9 Absatz 2 Nummer 1 und Absatz 4

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)
2.1		Classification according to Regulation (EC) No 1272/2008 (CLP): change in the listing (table)
2.2		- hazard statements: change in the listing (table)
11.1		Acute toxicity: change in the listing (table)
12.1		Aquatic toxicity (acute): change in the listing (table)
12.1		Aquatic toxicity (chronic): change in the listing (table)
13.1	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.	List of wastes, Decision 2000/532/EC on the list of waste: No waste code number can be assigned for this product according to the European Waste Catalogue, as classification is only possible based on the intended use by the consumer. The waste code number must be assigned according to the European Waste Catalogue (Commission Decisions 200/532/EC and 2001/118/EC) in consultation with the regional waste disposal company.
14.7	Special provisions (SP): 274, 335, 375, 601	Special provisions (SP): 274, 335, 375, 601, 650
14.7	Special provisions (SP): 274, 335, 969	Special provisions (SP): 274, 335, 375, 969
15.1		Restrictions according to REACH, Annex XVII: change in the listing (table)
15.1		Chemikalien-Verbotsverordnung (Chemicals Prohibition Ordinance) - ChemVerbotsV
15.1		Anforderungen in Bezug auf die Abgabe: change in the listing (table)
16		Abbreviations and acronyms: change in the listing (table)
16		List of relevant phrases (code and full text as stated in section 2 and 3): change in the listing (table)

Safety Data Sheet

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

amended by 2020/878/EU

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Version number: 7.0
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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 relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
ADR/RID/ADN	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
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
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)
ED	Endocrine disruptor
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
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)
LGK	Lagerklasse (storage class according to TRGS 510, Germany)
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
NOEC	No Observed Effect Concentration

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Abbr.	Descriptions of used abbreviations
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
SVHC	Substance of Very High Concern
TRGS	Technische Regeln für Gefahrstoffe (technical rules for hazardous substances, Germany)
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 section 2 and 3)

Code	Text
EUH440	Accumulates in the environment and living organisms including in humans.
EUH441	Strongly accumulates in the environment and living organisms including in humans.
H304	May be fatal if swallowed and enters airways.
H360FD	May damage fertility. May damage the unborn child.
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.