

# Safety Data Sheet

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

# FRAGOL

## FRAGOLTHERM 590

Version number: 2.0  
Replaces version of: 2019-03-26 (1)

Revision: 2020-12-10

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

#### 1.1 Product identifier

Trade name	<b>FRAGOLTHERM 590</b>
Registration number (REACH)	not relevant (mixture)
Unique formula identifier (UFI)	3M00-Q0KT-J00A-FHJY

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

Relevant identified uses	Heat transfer fluid 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

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
3.2	skin corrosion/irritation	2	Skin Irrit. 2	H315
3.7	reproductive toxicity	1	Repr. 1	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.

The most important adverse physicochemical, human health and environmental effects

Spillage and fire water can cause pollution of watercourses.

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### Additional information

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

## 2.2 Label elements

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

- signal word Danger

- pictograms

GHS07, GHS08,  
GHS09



- hazard statements

H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H360FD May damage fertility. May damage the unborn child.  
H410 Very toxic to aquatic life with long lasting effects.

- precautionary statements

P202 Do not handle until all safety precautions have been read and understood.  
P264 Wash hands thoroughly after handling.  
P280 Wear protective gloves.  
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.

- hazardous ingredients for labelling

# Benzyltoluene  
# Dibenzylbenzene, ar-methyl derivative

## 2.3 Other hazards

Special danger of slipping by leaking/spilling product. Thermal decomposition can lead to release of irritating and toxic gases and vapors. Contact with combustible material may cause fire.

Results of PBT and vPvB assessment

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

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Not relevant (mixture)

### 3.2 Mixtures

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

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes	Specific Conc. Limits	M-Factors
Benzyltoluene	CAS No 27776-01-8  EC No 248-654-8  REACH Reg. No 01- 2119488215 -34-xxxx	70 – 80	Skin Irrit. 2 / H315 Repr. 1 / H360FD Asp. Tox. 1 / H304 Aquatic Chronic 2 / H411	  			

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Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes	Specific Conc. Limits	M-Factors
Dibenzylbenzene, ar-methyl derivative	CAS No 53585-53-8  EC No 258-649-2  REACH Reg. No 01- 2119488667 -17-xxxx	20 – 30	Repr. 1B / H360FD Asp. Tox. 1 / H304 Aquatic Chronic 1 / H410	 			M-factor (chronic) = 10.0

### Remarks

For full text of Hazard- and EU Hazard-statements: see SECTION 16. All the percentages given are percentages by weight unless stated otherwise.

## 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.

#### 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 immediately and drink plenty of water. Do NOT induce vomiting.

### 4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

#### If inhaled

#### If on skin

causes skin irritation

#### If in eyes

slightly irritating

#### If swallowed

slightly irritating

### 4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically. For specialist advice physicians should contact the poison centre.

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### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

Suitable extinguishing media

Foam, Dry extinguishing powder, Carbon dioxide (CO<sub>2</sub>)

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). 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.

### 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. Avoid contact with skin and eyes. Do not breathe mist/vapours. In case of insufficient ventilation, wear suitable respiratory equipment.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases. Wear suitable protective clothing and gloves.

#### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

#### 6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece).

Appropriate containment techniques

Use of adsorbent materials.

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. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. 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. In case of insufficient ventilation, wear suitable respiratory equipment. Provide eyewash stations and safety showers at the workplace.

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

Control of effects

Protect against external exposure, such as

Heat. High temperatures. UV-radiation/sunlight. Static discharges. Moisture.

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.

#### 7.3 Specific end use(s)

There is no additional information.

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

**National limit values**

No information available.

**Relevant DNELs/DMELs/PNECs and other threshold levels**

No data available.

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
Benzyltoluene	27776-01-8	DNEL	4.93 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
Benzyltoluene	27776-01-8	DNEL	7 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Benzyltoluene	27776-01-8	DNEL	0.87 mg/m <sup>3</sup>	human, inhalatory	consumer (private households)	chronic - systemic effects
Benzyltoluene	27776-01-8	DNEL	2.5 mg/kg bw/day	human, dermal	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
Benzyltoluene	27776-01-8	DNEL	0.25 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects
Dibenzylbenzene, ar-methyl derivative	53585-53-8	DNEL	18.5 µg/m <sup>3</sup>	human, oral	consumer (private households)	chronic - systemic effects
Dibenzylbenzene, ar-methyl derivative	53585-53-8	DNEL	0.185 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
Dibenzylbenzene, ar-methyl derivative	53585-53-8	DNEL	64.4 µg/m <sup>3</sup>	human, inhalatory	consumer (private households)	chronic - systemic effects
Dibenzylbenzene, ar-methyl derivative	53585-53-8	DNEL	0.37 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Dibenzylbenzene, ar-methyl derivative	53585-53-8	DNEL	0.259 mg/cm <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects

Relevant PNECs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Benzyltoluene	27776-01-8	PNEC	0.99 g/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Benzyltoluene	27776-01-8	PNEC	1 mg/kg	terrestrial organisms	soil	short-term (single instance)
Benzyltoluene	27776-01-8	PNEC	331 µg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Benzyltoluene	27776-01-8	PNEC	33.1 µg/kg	aquatic organisms	marine sediment	short-term (single instance)
Dibenzylbenzene, ar-methyl derivative	53585-53-8	PNEC	0.028 µg/l	not specified	freshwater	not specified
Dibenzylbenzene, ar-methyl derivative	53585-53-8	PNEC	0.003 µg/l	not specified	marine water	not specified
Dibenzylbenzene, ar-methyl derivative	53585-53-8	PNEC	0.11 mg/kg	not specified	freshwater sediment	not specified
Dibenzylbenzene, ar-methyl derivative	53585-53-8	PNEC	0.11 mg/kg	not specified	marine sediment	not specified
Dibenzylbenzene, ar-methyl derivative	53585-53-8	PNEC	2 mg/kg	not specified	soil	not specified
Dibenzylbenzene, ar-methyl derivative	53585-53-8	PNEC	1,000 mg/l	not specified	sewage treatment plant (STP)	not specified

## 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).

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### 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. 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

PVC: polyvinyl chloride

### - material thickness

use gloves with a minimum material thickness: 1.2 - 1.4 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. 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	light yellow
Odour	aromatic

#### Other safety parameters

pH (value)	not determined
Pour point	-57 °C (ISO 3016:1994)
Initial boiling point and boiling range	290 °C
Flash point	140 °C (DIN EN ISO 2592)
Evaporation rate	not determined
Flammability (solid, gas)	not relevant (fluid)
Explosive limits	not determined
Vapour pressure	not determined

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Density	1,008 kg/m <sup>3</sup> at 20 °C 965 kg/m <sup>3</sup> at 80 °C
Vapour density	this information is not available
Solubility(ies)	
- water solubility	56 µg/l at 20 °C
Partition coefficient	
- n-octanol/water (log KOW)	this information is not available
Auto-ignition temperature	459 °C (EU method A.15)
Viscosity	
- kinematic viscosity	5.9 mm <sup>2</sup> /s at 20 °C 3.3 mm <sup>2</sup> /s at 40 °C
Explosive properties	none
Oxidising properties	none

### 9.2 Other information

There is no additional information.

Surface tension	38.19 mN/m (25 °C) (Supplier)
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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

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



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### 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)

##### Acute toxicity

Shall not be classified as acutely toxic. May be harmful if swallowed.

##### - acute toxicity estimate (ATE)

Exposure route	ATE
Oral	3,080 mg/kg

##### - acute toxicity of components of the mixture

Acute toxicity of components of the mixture					
Name of substance	CAS No	Exposure route	Endpoint	Value	Species
Benzyltoluene	27776-01-8	inhalation: vapour	LC50	>1.88 mg/l/4h	rat
Benzyltoluene	27776-01-8	dermal	LD50	>2,000 mg/kg	rat
Benzyltoluene	27776-01-8	oral	LD50	3,015 mg/kg	rat
Dibenzylbenzene, ar-methyl derivative	53585-53-8	inhalation: vapour	LC50	>0.24 mg/l/1h	rat
Dibenzylbenzene, ar-methyl derivative	53585-53-8	oral	LD50	>5,000 mg/kg	rat
Dibenzylbenzene, ar-methyl derivative	53585-53-8	dermal	LD50	>2,000 mg/kg	rat

##### Skin corrosion/irritation

Causes skin irritation. Irritation and significant inflammation of the skin (dermatitis) due to the defatting properties of the product may be caused by repeated or prolonged exposure.

##### Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant. May cause slight irritation. (OECD Guideline 402. Rabbit)

##### 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.

##### 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).

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Exposure route	Endpoint	Value	Exposure time	Species	Method
oral	NOAEL	500 mg/kg bw/day		rat	OECD Guideline 408

### Aspiration hazard

May be fatal if swallowed and enters airways.

## SECTION 12: Ecological information

### 12.1 Toxicity

Very toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Benzyltoluene	27776-01-8	LC50	>267 µg/l	fish	96 h
Benzyltoluene	27776-01-8	EC50	>0.24 mg/l	aquatic invertebrates	24 h
Benzyltoluene	27776-01-8	NOEC	267 µg/l	fish	96 h
Dibenzylbenzene, ar-methyl derivative	53585-53-8	LC0	≥0.029 mg/l	aquatic invertebrates	48 h
Dibenzylbenzene, ar-methyl derivative	53585-53-8	LC50	>50 µg/l	fish	96 h
Dibenzylbenzene, ar-methyl derivative	53585-53-8	ErC50	>16 µg/l	algae	72 h
Dibenzylbenzene, ar-methyl derivative	53585-53-8	NOEC	>50 µg/l	fish	96 h

Aquatic toxicity (chronic) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Benzyltoluene	27776-01-8	growth (EbCx) 10%	>0.99 g/l	microorganisms	5 h
Dibenzylbenzene, ar-methyl derivative	53585-53-8	NOEC	>0.46 mg/l	fish	14 d
Dibenzylbenzene, ar-methyl derivative	53585-53-8	LOEC	0.1 mg/l	aquatic invertebrates	21 d
Dibenzylbenzene, ar-methyl derivative	53585-53-8	growth (EbCx) 10%	>1,000 mg/l	microorganisms	4.92 h

### 12.2 Persistence and degradability

Not readily biodegradable.

Degradability of components of the mixture						
Name of substance	CAS No	Process	Degradation rate	Time	Method	Source
Benzyltoluene	27776-01-8	biotic/abiotic	<60 %	28 d	OECD Guideline 301	

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Degradability of components of the mixture

Name of substance	CAS No	Process	Degradation rate	Time	Method	Source
Benzyltoluene	27776-01-8	carbon dioxide generation	46 %	29 d		ECHA

### 12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components of the mixture

Name of substance	CAS No	BCF	Log KOW	BOD5/COD
Benzyltoluene	27776-01-8	344	4.31 (pH value: ~7, 20 °C)	
Dibenzylbenzene, ar-methyl derivative	53585-53-8	7,525	>6 (pH value: ~7, 22 °C)	

### 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

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 consumer, 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.

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### SECTION 14: Transport information

<b>14.1 UN number</b>	3082
<b>14.2 UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Technical name (Hazardous ingredients)	Benzyltoluene, Dibenzylbenzene, ar-methyl derivative
<b>14.3 Transport hazard class(es)</b>	
Class	9 (environmentally hazardous)
<b>14.4 Packing group</b>	III (substance presenting low danger)
<b>14.5 Environmental hazards</b>	hazardous to the aquatic environment
Environmentally hazardous substance (aquatic environment)	Benzyltoluene, Dibenzylbenzene, ar-methyl derivative
<b>14.6 Special precautions for user</b>	
Provisions for dangerous goods (ADR) should be complied within the premises.	
<b>14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code</b>	
Not applicable.	

#### Information for each of the UN Model Regulations

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

UN number	3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Class	9
Classification code	M6
Packing group	III
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)**

UN number	3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Class	9
Marine pollutant	yes (hazardous to the aquatic environment)
Packing group	III

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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)

UN number 3082

Proper shipping name Environmentally hazardous substance, liquid, n.o.s.

Class 9

Environmental hazards yes (hazardous to the aquatic environment)

Packing group III

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	Restriction	No
FRAGOLTHERM 590	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 R65 or H304,
- Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).
- Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:
  - lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: 'Keep lamps filled with this liquid out of the reach of children'; and, by 1 December 2010, 'Just a sip of lamp oil - or even sucking the wick of lamps - may lead to life-threatening lung damage';
  - grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: 'Just a sip of grill lighter may lead to life threatening lung damage';
  - lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.
- No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public.

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### Legend

7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.

### 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)	
Benzyltoluene	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

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

## SECTION 16: Other information

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

Section	Former entry (text/value)	Actual entry (text/value)
1.1		Unique formula identifier (UFI): 3M00-Q0KT-J00A-FHJY
2.1		Classification according to Regulation (EC) No 1272/2008 (CLP): change in the listing (table)
2.2		- pictograms: change in the listing (table)

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Section	Former entry (text/value)	Actual entry (text/value)
2.2		- hazard statements: change in the listing (table)
2.2		- precautionary statements: change in the listing (table)
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.	Mixtures: The product does not contain any (other) ingredients which are classified according to present knowledge of the supplier and contribute to the classification of the product and hence require reporting in this section.
4.1	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.	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.
4.1	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. 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.
4.1	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 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.
7.2		- flammability hazards: Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge.
7.2		- packaging compatibilities: Only packagings which are approved (e.g. acc. to ADR) may be used.
8.2	Respiratory protection: In case of inadequate ventilation wear respiratory protection. Type: A (against organic gases and vapours with a boiling point of > 65 °C, colour code: Brown). 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).	Respiratory protection: In case of inadequate ventilation wear respiratory protection. Type: ABEK-P2 (combined filters against gases, vapours and particles, colour code: Brown/Grey/Yellow/Green/White).
9.1	Initial boiling point and boiling range: not determined	Initial boiling point and boiling range: 290 °C
9.1	Water solubility: insoluble	Water solubility: 56 µg/l at 20 °C
11.1	Reproductive toxicity: Shall not be classified as a reproductive toxicant.	Reproductive toxicity: May damage the unborn child. May damage fertility.
12.1	Toxicity: May cause long lasting harmful effects to aquatic life.	Toxicity: Very toxic to aquatic life with long lasting effects.
12.2	Persistence and degradability: Potentially biodegradable.	Persistence and degradability: Not readily biodegradable.
12.3	Bioaccumulative potential: The bioaccumulation potential is low.	Bioaccumulative potential: Data are not available.

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Section	Former entry (text/value)	Actual entry (text/value)
13.1	Waste treatment of containers/packagings: Handle contaminated packages in the same way as the substance itself.	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.
14.1	UN number: not subject to transport regulations	UN number: 3082
14.2	UN proper shipping name: not relevant	UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
14.2		Technical name (Hazardous ingredients): Benzyltoluene, Dibenzylbenzene, ar-methyl derivative
14.3	Transport hazard class(es): none	Transport hazard class(es)
14.3		Class: 9 (environmentally hazardous)
14.5	Environmental hazards: non-environmentally hazardous acc. to the dangerous goods regulations	Environmental hazards: hazardous to the aquatic environment
14.5		Environmentally hazardous substance (aquatic environment): Benzyltoluene, Dibenzylbenzene, ar-methyl derivative
14.6	Special precautions for user: There is no additional information.	Special precautions for user: Provisions for dangerous goods (ADR) should be complied within the premises.
14.7		UN number: 3082
14.7		Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
14.7		Class: 9
14.7		Classification code: M6
14.7		Packing group: III
14.7		Danger label(s): 9, fish and tree
14.7		Danger label(s): change in the listing (table)
14.7		Environmental hazards: yes (hazardous to the aquatic environment)
14.7		Special provisions (SP): 274, 335, 375, 601
14.7		Excepted quantities (EQ): E1
14.7		Limited quantities (LQ): 5 L
14.7		Transport category (TC): 3
14.7		Tunnel restriction code (TRC): -



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Section	Former entry (text/value)	Actual entry (text/value)
14.7		Hazard identification No: 90
14.7		Emergency Action Code: 3Z
14.7	International Maritime Dangerous Goods Code (IMDG): Not subject to IMDG.	International Maritime Dangerous Goods Code (IMDG)
14.7		UN number: 3082
14.7		Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
14.7		Class: 9
14.7		Marine pollutant: yes (hazardous to the aquatic environment)
14.7		Packing group: III
14.7		Danger label(s): 9, fish and tree
14.7		Danger label(s): change in the listing (table)
14.7		Special provisions (SP): 274, 335, 969
14.7		Excepted quantities (EQ): E1
14.7		Limited quantities (LQ): 5 L
14.7		EmS: F-A, S-F
14.7		Stowage category: A
14.7	International Civil Aviation Organization (ICAO-IATA/ DGR): Not subject to ICAO-IATA.	International Civil Aviation Organization (ICAO-IATA/ DGR)
14.7		UN number: 3082
14.7		Proper shipping name: Environmentally hazardous substance, liquid, n.o.s.
14.7		Class: 9
14.7		Environmental hazards: yes (hazardous to the aquatic environment)
14.7		Packing group: III
14.7		Danger label(s): 9, fish and tree
14.7		Danger label(s): change in the listing (table)

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Section	Former entry (text/value)	Actual entry (text/value)
14.7		Special provisions (SP): A97, A158, A197
14.7		Excepted quantities (EQ): E1
14.7		Limited quantities (LQ): 30 kg
15.1		Water Framework Directive (WFD)
15.1		List of pollutants (WFD): change in the listing (table)
16		Abbreviations and acronyms: change in the listing (table)

### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
Asp. Tox.	Aspiration hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BOD	Biochemical Oxygen Demand
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
COD	Chemical oxygen demand
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)
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

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Abbr.	Descriptions of used abbreviations
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
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
LOEC	Lowest Observed Effect Concentration
log KOW	n-Octanol/water
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
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
Repr.	Reproductive toxicity
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
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.

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
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H360FD	May damage fertility. May damage the unborn child.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

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The logo for FRAGOL, consisting of the word "FRAGOL" in a bold, yellow, sans-serif font.

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### Disclaimer

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