

# SAFETY DATA SHEET

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

Trade name : Firegel  
Revision date : 21.01.2019 Version (Revision) : 3.0.3 (3.0.2)  
Print date : 23-01-2019

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

### 1.1 Product identifier

Firegel (140040)

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

#### Relevant identified uses

Fuel for gel burners and braziers. Consumer uses: Private households (= general public = consumers)

#### Uses advised against

This product should not be used for purposes other than the applications referred to above.

### 1.3 Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor)

höfats GmbH

Street: Albert Einstein Straße 6

Postal code/city: 87437 Kempten

Telephone : +49 831 98 90 94 60

Information contact: E-Mail: info@hoefats.com

### 1.4 Emergency telephone number

Members of the public seeking specific information on poisons should contact: In England and Wales: NHS 111 - dial 111, in Scotland: NHS 24 - dial 111 Ireland +353 (0)1 8092566 or +353 (0)1 8379964 National Poisons Information Centre

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

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

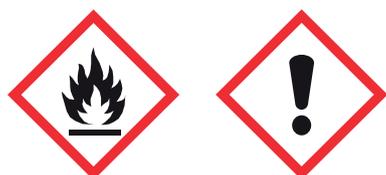
EEye Irrit. 2 ; H319 - Serious eye damage/eye irritation : Category 2 ; Causes serious eye irritation.

Flam. Liq. 2 ; H225 - Flammable liquids : Category 2 ; Highly flammable liquid and vapour.

### 2.2 Label elements

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

#### Hazard pictograms



Flame (GHS02) · Exclamation mark (GHS07)

### Signal word

Danger

### Hazard statements

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

### Precautionary statements

P102 Keep out of reach of children.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P337+P313 If eye irritation persists: Get medical advice/attention.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

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

### 2.3 Other hazards

This material can accumulate static charge by flow or agitation and can be ignited by static discharge. Vapours can travel considerable distances to a source of ignition where they can ignite, flash back, or explode. Irritating to respiratory system and skin.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Hazardous ingredients

ETHANOL ; REACH registration No. : 01-2119457610-43 ; EC No. : 200-578-6; CAS No. : 64-17-5

Weight fraction :  $\geq 25$  -  $< 75$  %

Classification 1272/2008 [CLP] : Flam. Liq. 2 ; H225 Eye Irrit. 2 ; H319

PROPAN-2-OL ; REACH registration No. : 01-2119457558-25 ; EC No. : 200-661-7; CAS No. : 67-63-0

Weight fraction :  $\geq 10$  -  $< 20$  %

Classification 1272/2008 [CLP] : Flam. Liq. 2 ; H225 Eye Irrit. 2 ; H319 STOT SE 3 ; H336

**This mixture contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH**

None

**This mixture contains the following substances of very high concern (SVHC) which are subject to authorisation according to Annex XIV of REACH**

None

#### **Additional information**

Full text of H- and EUH-phrases: see section 16.

## **SECTION 4: First aid measures**

### **4.1 Description of first aid measures**

#### **General information**

When in doubt or if symptoms are observed, get medical advice. Observe risk of aspiration if vomiting occurs. If unconscious place in recovery position and seek medical advice. If breathing is irregular or stopped, administer artificial respiration. Remove casualty to fresh air and keep warm and at rest.

#### **Following inhalation**

Remove casualty to fresh air and keep warm and at rest. In all cases of doubt, or when symptoms persist, seek medical attention.

#### **In case of skin contact**

Wash immediately with: Water In all cases of doubt, or when symptoms persist, seek medical attention. Change contaminated, saturated clothing. Wash contaminated clothing prior to re-use.

#### **After eye contact**

Rinse immediately carefully and thoroughly with eye-bath or water. In all cases of doubt, or when symptoms persist, seek medical attention.

#### **After ingestion**

Rinse mouth thoroughly with water. Do NOT induce vomiting. In all cases of doubt, or when symptoms persist, seek medical attention.

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

The following symptoms may occur: Headache Dizziness Nausea Diminished responsiveness Danger of irritation to eyes, nose, throat and the air passages. depression of central nervous system Cardiac arrhythmias Drowsiness Vomiting Dilated pupils

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

Treat symptomatically.

## **SECTION 5: Firefighting measures**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

Water mist alcohol resistant foam BC-powder Carbon dioxide (CO<sub>2</sub>)

#### **Unsuitable extinguishing media**

Full water jet

### **5.2 Special hazards arising from the substance or mixture**

#### **Hazardous combustion products**

Carbon monoxide Carbon dioxide (CO<sub>2</sub>)

### **5.3 Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective

clothing.

## **SECTION 6: Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Be aware that gases can spread at ground level (heavier than air) and pay attention to the wind direction. Remove all sources of ignition. Use only antistatically equipped (spark-free) tools.

#### **For non-emergency personnel**

##### **Protective equipment**

Use personal protection equipment. Wear closed protection glasses. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

### **6.2 Environmental precautions**

Make sure spills can be contained, e.g. in sump pallets or kerbed areas. Use foam on spills to minimise vapours.

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

#### **For cleaning up**

Suitable material for taking up: Sand Kieselguhr Limestone powder Collect in closed and suitable containers for disposal. Delivery to an approved waste disposal company. The contaminated area should be cleaned up immediately with: Water

### **6.4 Reference to other sections**

See protective measures under point 7 and 8.

## **SECTION 7: Handling and storage**



### **7.1 Precautions for safe handling**

#### **Protective measures**

##### **Measures to prevent fire**

Use only antistatically equipped (spark-free) tools. Provide earthing of containers, equipment, pumps and ventilation facilities. Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours are heavier than air, spread along floors and form explosive mixtures with air.

##### **Measures to prevent aerosol and dust generation**

During filling, metering and sampling should be used if possible: Closed devices

#### **Environmental precautions**

Do not empty into drains.

#### **Specific requirements or handling rules**

Remove contaminated, saturated clothing immediately.

### **7.2 Conditions for safe storage, including any incompatibilities**

#### **Technical measures and storage conditions**

Protect against direct sunlight. Keep container tightly closed in a cool, well-ventilated place. Ensure adequate ventilation of the storage area. Suitable container/equipment material: Stainless steel Aluminium Iron. Copper Glass Unsuitable container/equipment material: No data available

## Hints on joint storage

### Keep away from

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Oxidizing agent

### 7.3 Specific end use(s)

Fuel for gel burners and braziers.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limit values

ETHANOL ; CAS No. : 64-17-5

Limit value type (country of origin) : Exposure Limit (8h) ( NL )

Limit value : 260 mg/m<sup>3</sup> / 136 ppm

Remark : H

Version : 01-01-2007

Limit value type (country of origin) : Exposure Limit (15min) ( NL )

Limit value : 1900 mg/m<sup>3</sup> / 992 ppm

Remark : H

Version : 01-01-2007

PROPAN-2-OL ; CAS No. : 67-63-0

Limit value type (country of origin) : Exposure Limit (8h) ( NL )

Limit value : 200 ppm

Version :

Limit value type (country of origin) : Exposure Limit (15min) ( NL )

Limit value : 400 ppm

Version :

### 8.2 Exposure controls

#### Appropriate engineering controls

Use only in well-ventilated areas. Use explosion-proof machinery, apparatus, ventilation facilities, tools etc. Provide earthing of containers, equipment, pumps and ventilation facilities. Use only antistatically equipped (spark-free) tools. Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.

#### Personal protection equipment



#### Eye/face protection



Suitable eye protection

Eye glasses with side protection

#### Skin protection

Hand protection



Suitable gloves type : The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

Suitable material : Butyl caoutchouc (butyl rubber) Tetrafluoroethylene

Unsuitable material : NR (natural rubber, natural latex) PVA (Polyvinyl alcohol) PVC (Polyvinyl chloride)

Required properties : liquid-tight.

Remark : DIN-/EN-Norms DIN EN 420 DIN EN 374

#### Body protection

Protective clothing. Chemical resistant safety shoes

Remark : Immediately remove any contaminated clothing, shoes or stockings. Wash contaminated clothing prior to re-use.

#### Respiratory protection

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Suitable respiratory protection apparatus Full-/half-/quarter-face masks (DIN EN 136/140) Filtering device (full mask or mouthpiece) with filter: A

#### General health and safety measures

Wash hands before breaks and after work.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance : Gel

Colour: yellow

Odour: Alcohol

#### Safety relevant basis data

Melting point/melting range : No data available

Freezing point : ( 1013 hPa ) No data available

Initial boiling point and boiling range : ( 1013 hPa ) No data available

Decomposition temperature : No data available

Flash point : 13 - 16 °C

Ignition temperature : No data available

Lower explosion limit : No data available

Upper explosion limit : No data available

Vapour pressure : ( 20 °C ) No data available

Evaporation rate : No data available

Density : ( 15 °C ) 0,84 - 0,87 g/cm<sup>3</sup>

Water solubility : ( 20 °C ) No data available

pH : No data available

log P O/W : No data available

Viscosity : ( 20 °C ) No data available

Relative vapour density : ( 20 °C ) No data available

Flammable gases : No data available.

Oxidising liquids : Not oxidising.

Explosive properties : Not applicable.

### 9.2 Other information

None

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Be aware that gases can spread at ground level (heavier than air) and pay attention to the wind direction. This material is combustible and can be ignited by heat, sparks, flames, or other sources of ignition (e.g. static electricity, pilot lights, or mechanical/electrical equipment).

### 10.2 Chemical stability

Stable under normal conditions of use

### 10.3 Possibility of hazardous reactions

Oxidising agent, strong. Violent reaction with: Strong acid

### 10.4 Conditions to avoid

This material is combustible and can be ignited by heat, sparks, flames, or other sources of ignition (e.g. static electricity, pilot lights, or mechanical/electrical equipment). Keep away from sources of ignition - No smoking. Use only antistatically equipped (spark-free) tools.

### 10.5 Incompatible materials

Oxidizing agent.

### 10.6 Hazardous decomposition products

Carbon monoxide Carbon dioxide.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute effects

##### Acute oral toxicity

Parameter :	LD50 ( ETHANOL ; CAS No. : 64-17-5 )
Exposure route :	Oral
Species :	Rat
Effective dose :	10470 mg/kg bw
Method :	OECD 401
Parameter :	LD50 ( PROPAN-2-OL ; CAS No. : 67-63-0 )
Exposure route :	Oral
Species :	Rat
Effective dose :	5840 mg/kg
Test result :	Minimally Toxic.
Method :	OECD 401

##### Acute dermal toxicity

Parameter :	LD50 ( PROPAN-2-OL ; CAS No. : 67-63-0 )
Exposure route :	Dermal
Species :	Rabbit
Effective dose :	13900 mg/kg
Test result :	Minimally Toxic.
Method :	OECD 402

##### Acute inhalation toxicity

Parameter :	LC50 ( ETHANOL ; CAS No. : 64-17-5 )
Exposure route :	Inhalation
Species :	Rat
Effective dose :	124,7 mg/l

Exposure time :	4 h
Method :	OECD 403
Parameter :	LC50 ( PROPAN-2-OL ; CAS No. : 67-63-0 )
Exposure route :	Inhalation
Species :	Rat
Effective dose :	> 25000 mg/m3
Exposure time :	6 h
Test result :	Minimally Toxic.
Method :	OECD 403

### Irritant and corrosive effects

#### Primary irritation to the skin

Parameter :	Primary irritation to the skin ( ETHANOL ; CAS No. : 64-17-5 )
Species :	Rabbit
Exposure time :	24 h
Result :	Not an irritant
Method :	OECD 404
Result :	Not an irritant.

#### Irritation to eyes

Parameter :	Irritation to eyes ( ETHANOL ; CAS No. : 64-17-5 )
Species :	Rabbit
Exposure time :	14 day
Result :	Irritant
Method :	OECD 405
Parameter :	Irritation to eyes ( PROPAN-2-OL ; CAS No. : 67-63-0 )
Result :	Causes serious eye irritation
Method :	OECD 405
Result :	Causes serious eye irritation.

### Sensitisation

#### In case of skin contact

Parameter :	Skin sensitisation ( ETHANOL ; CAS No. : 64-17-5 )
Species :	Mouse
Result :	Not sensitising.
Method :	OECD 429

#### In case of inhalation

Parameter :	Sensitisation to the respiratory tract ( ETHANOL ; CAS No. : 64-17-5 )
Result :	Not sensitising.

### Repeated dose toxicity (subacute, subchronic, chronic)

#### Subacute oral toxicity

Parameter :	LOAEL(C) ( ETHANOL ; CAS No. : 64-17-5 )
Exposure route :	Oral
Species :	Rat
Effective dose :	3160 mg/kg
Exposure time :	98 day
Method :	OECD 408

#### Subacute inhalation toxicity

Parameter :	LOAEC ( ETHANOL ; CAS No. : 64-17-5 )
Exposure route :	Inhalation
Species :	Rat

Effective dose : 1,3 mg/l

#### Additional information

Specific effects: Frequently or prolonged contact with skin may cause dermal irritation. Gastrointestinal complaints Causes damage to liver through prolonged or repeated exposure if swallowed. May cause damage to heart through prolonged or repeated exposure if swallowed. Ingestion causes nausea, weakness and central nervous system effects.

#### CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

##### Carcinogenicity

Parameter : NOAEL(C) ( ETHANOL ; CAS No. : 64-17-5 )  
Exposure route : Oral  
Species : Rat  
Effective dose : > 3000 Mg/kg bw/day  
Exposure time : 728 day  
Test result : Negative.  
Method : OECD 451  
Parameter : NOAEC ( ETHANOL ; CAS No. : 64-17-5 )  
Exposure route : Inhalation  
Species : Rat  
Effective dose : >= 1,3 ppm  
Exposure time : 728  
Test result : Negative.  
Method : OECD 453

##### Assessment/classification

This substance does not meet the criteria for classification as CMR category 1A or 1B according to CLP.

##### Germ cell mutagenicity

###### In vitro mutagenicity

Parameter : Gene-mutations mammalian cells ( ETHANOL ; CAS No. : 64-17-5 )  
Species : Mouse lymphoma cells  
Test result : Negative.  
Method : OECD 476

###### In vivo mutagenicity

Parameter : Chromosomal aberrations ( ETHANOL ; CAS No. : 64-17-5 )  
Exposure route : Oral  
Species : Mouse  
Exposure time : 5 day  
Test result : Negative.  
Method : OECD 478

##### Assessment/classification

This substance does not meet the criteria for classification as CMR category 1A or 1B according to CLP.

##### Reproductive toxicity

###### Adverse effects on sexual function and fertility

Parameter : NOAEL(C) ( ETHANOL ; CAS No. : 64-17-5 )  
Exposure route : Oral  
Species : Mouse  
Effective dose : 20700 mg/kg  
Exposure time : 118 day  
Test result : Negative.  
Method : OECD 416

##### Adverse effects on developmental toxicity

Parameter : NOAEL(C) ( ETHANOL ; CAS No. : 64-17-5 )  
Exposure route : Inhalation  
Species : Rat  
Effective dose : >= 20000 ppm  
Exposure time : 20 day  
Test result : Negative.  
Method : OECD 414

##### Assessment/classification

This substance does not meet the criteria for classification as CMR category 1A or 1B according to CLP.

## SECTION 12: Ecological information

### 12.1 Toxicity

harmless to aquatic organisms up to the tested concentration

#### Aquatic toxicity

##### Acute (short-term) fish toxicity

Parameter : LC50 ( ETHANOL ; CAS No. : 64-17-5 )  
Species : Pimephales promelas (fathead minnow)  
Effective dose : 15300 mg/l  
Exposure time : 96 h  
Evaluation : Harmless to fish up to the concentration tested.  
Parameter : LC50 ( PROPAN-2-OL ; CAS No. : 67-63-0 )  
Species : Pimephales promelas (fathead minnow)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : 9640 mg/l  
Exposure time : 96 h

##### Chronic (long-term) fish toxicity

Parameter : ChV ( ETHANOL ; CAS No. : 64-17-5 )  
Species : Fish  
Effective dose : 245 mg/l  
Exposure time : 30 day

##### Acute (short-term) daphnia toxicity

Parameter : LC50 ( ETHANOL ; CAS No. : 64-17-5 )  
Species : Ceriodaphnia dubia  
Effective dose : 5012 mg/l  
Exposure time : 48 h  
Evaluation : Harmless to daphnia up to the tested concentration.  
Parameter : LC50 ( PROPAN-2-OL ; CAS No. : 67-63-0 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 9714 mg/l  
Exposure time : 24 h

##### Chronic (long-term) daphnia toxicity

Parameter : NOEC ( ETHANOL ; CAS No. : 64-17-5 )  
Species : Daphnia magna (Big water flea)  
Effective dose : 9,6 mg/l  
Exposure time : 9 day  
Evaluation : Harmless to daphnia up to the tested concentration.

### Acute (short-term) algae toxicity

Parameter : EC50 ( ETHANOL ; CAS No. : 64-17-5 )  
Species : Chlorella vulgaris  
Effective dose : 275 mg/l  
Exposure time : 3 day  
Evaluation : Harmless to algae up to the concentration tested.  
Method : OECD 201  
Parameter : LOEC ( PROPAN-2-OL ; CAS No. : 67-63-0 )  
Species : Algae  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : 1000 mg/l  
Exposure time : 8 day

### Bacteria toxicity

Parameter : EC50 ( ETHANOL ; CAS No. : 64-17-5 )  
Species : Paramecium caudatum  
Effective dose : 9,6 mg/l  
Exposure time : 9 day

## 12.2 Persistence and degradability

### Abiotic degradation

#### Photo-chemical elimination

Parameter : Photo-chemical elimination ( ETHANOL ; CAS No. : 64-17-5 )  
Species : Photo-chemical elimination  
Effective dose : 500000 cm3  
Exposure time : 40 h

### Biodegradation

Parameter : Biodegradation ( ETHANOL ; CAS No. : 64-17-5 )  
Inoculum : Degree of elimination  
Effective dose : 84 %  
Exposure time : 20 day  
Evaluation : Biodegradable.  
Parameter : Biodegradation ( PROPAN-2-OL ; CAS No. : 67-63-0 )  
Inoculum : Degree of elimination  
Effective dose : 53 %  
Exposure time : 5 day  
Evaluation : Biodegradable.

## 12.3 Bioaccumulative potential

Parameter : Bioconcentration factor (BCF) ( ETHANOL ; CAS No. : 64-17-5 ) Cyprinus carpio (Common Carp)  
Concentration : 1 - 4,5  
72 h  
Parameter : Partition coefficient n-octanol /water (log P O/W) ( ETHANOL ; CAS No. : 64-17-5 )  
Concentration : -0,35  
Parameter : Partition coefficient n-octanol /water (log P O/W) ( PROPAN-2-OL ; CAS No. : 67-63-0 )  
Concentration : 0,05

## 12.4 Mobility in soil

Adsorption/Desorption

Parameter : Soil ( ETHANOL ; CAS No. : 64-17-5 )  
Effective dose : 13,7 %  
Parameter : Water ( ETHANOL ; CAS No. : 64-17-5 )  
Effective dose : 33,1 %  
Parameter : Air ( ETHANOL ; CAS No. : 64-17-5 )  
Effective dose : 53,2 %  
Parameter : Sediment ( ETHANOL ; CAS No. : 64-17-5 )  
Effective dose : 0,1 %  
Parameter : Log KOC ( PROPAN-2-OL ; CAS No. : 67-63-0 )  
Effective dose : 1,5

## 12.5 Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

## 12.6 Other adverse effects

None

## 12.7 Additional ecotoxicological information

None

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Delivery to an approved waste disposal company. Contaminated packages must be completely emptied and can be re-used following proper cleaning. Handle contaminated packages in the same way as the substance itself.

Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code : 15 01 02\* plastic packaging Waste code : 15 01 10\* packaging containing residues of or contaminated by dangerous substances  
Waste code : 13 07 03\* other fuels (including mixtures)

## SECTION 14: Transport information

### 14.1 UN number

UN 1987

### 14.2 UN proper shipping name

UN proper shipping name

Land transport (ADR/RID)

ALCOHOLS, N.O.S. ( ETHANOL · ISOPROPANOL )

Sea transport (IMDG)

ALCOHOLS, N.O.S. ( ETHANOL · ISOPROPANOL )

Air transport (ICAO-TI / IATA-DGR)

ALCOHOLS, N.O.S. ( ETHANOL · ISOPROPANOL )

### 14.3 Transport hazard class(es)

#### Land transport (ADR/RID)

Class(es) :3

Classification code : F1

Hazard identification number (Kemler No.) : 33

Tunnel restriction code : D/E

Special provisions : 640D · LQ 1 L · E 2

Hazard label(s) : 3

#### Sea transport (IMDG)

Class(es) : 3

EmS-No. : F-E / S-D

Special provisions : LQ 1 I · E 2

Hazard label(s) : 3

#### Air transport (ICAO-TI / IATA-DGR)

Class(es) : 3

Special provisions : E 2

Hazard label(s) : 3

#### 14.4 Packing group

II

#### 14.5 Environmental hazards

Land transport (ADR/RID) : No

Sea transport (IMDG) : No

Air transport (ICAO-TI / IATA-DGR) : No

#### 14.6 Special precautions for user

None

#### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

### SECTION 15: Regulatory information

#### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This chemical is a VOC according to 99/13/EC. This chemical is a VOC according to 2004/42/EC.

##### EU legislation

##### Other regulations (EU)

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

The product is classified and labelled according to EC directives or corresponding national laws.

##### National regulations

##### Water hazard class (WGK)

slightly hazardous to water (WGK 1) Classification according to VwVwS, Annex 4.

##### Additional information

ICPE code: 4331

#### 15.2 Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

### SECTION 16: Other information

#### 16.1 Indication of changes

02. Label elements · 03. Hazardous ingredients · 08. Occupational exposure limit values · 08. DNEL/DMEL · 08. PNEC

#### 16.2 Abbreviations and acronyms

a.i. = Active ingredient

ACGIH = American Conference of Governmental Industrial Hygienists (US)

ADR = European Agreement concerning the International Carriage of Dangerous Goods by Road

AFFF = Aqueous Film Forming Foam

AISE = International Association for Soaps, Detergents and Maintenance Products (joint project of AISE and CEFIC)

AOAC = AOAC International (formerly Association of Official Analytical Chemists)

aq. = Aqueous

ASTM = American Society of Testing and Materials (US)

atm = Atmosphere(s)

B.V. = Beperkt Vennootschap (Limited)

BCF = Bioconcentration Factor

bp = Boiling point at stated pressure

bw = Body weight

ca = (Circa) about

CAS No = Chemical Abstracts Service Number (see ACS - American Chemical Society)

CEFIC = European Chemical Industry Council (established 1972)

CIPAC = Collaborative International Pesticides Analytical Council

CLP = REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

Conc = Concentration

cP = CentiPoise

cSt = Centistokes

d = Day(s)

DIN = Deutsches Institut für Normung e.V.

DNEL = Derived No-Effect Level

DT50 = Time for 50% loss; half-life

EbC50 = Median effective concentration (biomass, e.g. of algae)

EC = European Community; European Commission

EC50 = Median effective concentration

EINECS = European Inventory of Existing Commercial Chemical Substances (EU, outdated, now replaced by EC Number)

ELINCS = European List of Notified (New) Chemicals (see Tab 7, Background - Guide)

ErC50 = Median effective concentration (growth rate, e.g. of algae)

EU = European Union

EWC = European Waste Catalogue

FAO = Food and Agriculture Organization (United Nations)

GIFAP = Groupement International des Associations Nationales de Fabricants de Produits Agrochimiques (now CropLife International) h = Hour(s)

hPa = HectoPascal (unit of pressure)

IARC = International Agency for Research on Cancer

IATA = International Air Transport Association IC50 = Concentration that produces 50% inhibition

IMDG Code = International Maritime Dangerous Goods Code

IMO = International Maritime Organization

ISO = International Organization for Standardization

IUCLID = International Uniform Chemical Information Database

IUPAC = International Union of Pure and Applied Chemistry

kg = Kilogram

Kow = Distribution coefficient between n-octanol and water

kPa = KiloPascal (unit of pressure)

LC50 = Concentration required to kill 50% of test organisms

LD50 = Dose required to kill 50% of test organisms

LEL = Lower Explosive Limit/Lower Explosion Limit  
LOAEL = Lowest observed adverse effect level  
mg = Milligram  
min = Minute(s)  
ml = Milliliter  
mmHg = Pressure equivalent to 1 mm of mercury (133.3 Pa)  
mp = Melting point  
MRL = Maximum Residue Limit  
MSDS = Material Safety Data Sheet  
n.o.s. = Not Otherwise Specified  
NIOSH = National Institute for Occupational Safety and Health (US)  
NOAEL = No Observed Adverse Effect Level  
NOEC = No observed effect concentration  
NOEL = No Observable Effect Level  
NOx = Oxides of Nitrogen  
OECD = Organization for Economic Cooperation and Development  
OEL = Occupational Exposure Limits  
Pa = Pascal (unit of pressure)  
PBT = Persistent, Bioaccumulative or Toxic  
pH =  $-\log_{10}$  hydrogen ion concentration  
pKa =  $-\log_{10}$  acid dissociation constant  
PNEC = Previsible Non Effect Concentration  
POPs = Persistent Organic Pollutants  
ppb = Parts per billion  
PPE = Personal Protection Equipment  
ppm = Parts per million  
ppt = Parts per trillion  
PVC = Polyvinyl Chloride  
QSAR = Quantitative Structure-Activity Relationship  
REACH = Registration, Evaluation and Authorization of CHemicals (EU, see NCP)  
SI = International System of Units  
STEL = Short-Term Exposure Limit  
tech. = Technical grade  
TSCA = Toxic Substances Control Act (US)  
TWA = Time-Weighted Average  
vPvB = Very Persistent and Very Bioaccumulative  
WHO = World Health Organization = OMS  
y = Year(s)

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

### 16.3 Key literature references and sources for data

None

### 16.4 Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

No information available.

### 16.5 Relevant H- and EUH-phrases (Number and full text)

H225 Highly flammable liquid and vapour.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.

### 16.6 Training advice

None

### 16.7 Additional information

None