SENFROTH 38

Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 09/12/2005 Revision date: 27/09/2018 Supersedes: 27/09/2017 Version: 3.1

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

1.1. Product identifier

Product form : Mixture

Trade name : SENFROTH 38

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

1.2.1. Relevant identified uses

Main use category : Use in mining chemicals

Industrial/Professional use spec : Industrial

Use of the substance/mixture : Frother

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Senmin, a division of AECI Mining Solutions Limited
Corner of Bergius and Henry Streets
P.O. Box 2820, Sasolburg
Sasolburg, 1947
T +27 (0) 16 973 9600 - F +27 (0) 16 973 9797
senmin@senmin.co.za

1.4. Emergency telephone number

Emergency number : (+27) 16 973 9666

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Flammable liquids, Category 3	H226
Acute toxicity (oral), Category 4	H302
Acute toxicity (inhalation:dust,mist) Category 4	H332
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 1	H318
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation	H335

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

Flammable liquid and vapour. Harmful if inhaled. Harmful if swallowed. May cause respiratory irritation. Causes skin irritation. Causes serious eye damage.

2.2. Label elements

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

Hazard pictograms (CLP) :

GHS02 GHS05 GHS07

Signal word (CLP) : Danger

Hazardous ingredients : butan-1-ol; n-butanol; pentan-2-ol; 3-methyl-1-butanol; 2-methyl-1-butanol; 1-pentanol; SENKOL 700

Hazard statements (CLP) : H226 - Flammable liquid and vapour.
H302+H332 - Harmful if swallowed or if inhaled.
H315 - Causes skin irritation.
H318 - Causes serious eye damage.
H335 - May cause respiratory irritation.

Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 - Wash hands and face thoroughly after handling.
P280 - Wear goggles, gloves, clothing and respiratory protection.
P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
P312 - Call a POISON CENTRE or doctor if you feel unwell.

2.3. Other hazards
No additional information available

SECTION 3: Composition/information on ingredients
3.1. Substances
Not applicable
3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
1-pentanol	(CAS-No.) 71-41-0 (EC-No.) 200-752-1 (EC Index-No.) 603-200-00-1	20 - 35	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 STOT SE 3, H335
pentan-2-ol	(CAS-No.) 6032-29-7 (EC-No.) 227-907-6 (EC Index-No.) 603-006-00-7	10 - 20	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 STOT SE 3, H335
SENKOL 700	(CAS-No.) 141-98-7 (EC-No.) 205-517-7	13.5 - 14.7	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312
1-hexanol	(CAS-No.) 111-27-3 (EC-No.) 203-852-3 (EC Index-No.) 603-059-00-6	5 - 10	Acute Tox. 4 (Oral), H302
2-methyl-1-butanol	(CAS-No.) 137-32-6 (EC-No.) 205-289-9 (EC Index-No.) 603-006-00-7	5 - 10	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 STOT SE 3, H335
butan-1-ol; n-butanol	(CAS-No.) 71-36-3 (EC-No.) 200-751-6 (EC Index-No.) 603-004-00-6	3 - 5	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336
3-methyl-1-butanol	(CAS-No.) 123-51-3 (EC-No.) 204-633-5 (EC Index-No.) 603-006-00-7	3 - 5	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 STOT SE 3, H335
ISO BUTYL ALCOHOL	(CAS-No.) 78-83-1 (EC-No.) 201-148-0 (EC Index-No.) 603-108-00-1 (REACH-no) 01-2119484609-23	1 - 3	Flam. Liq. 3, H226 STOT SE 3, H335 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H336
N-PROPANOL	(CAS-No.) 71-23-8 (EC-No.) 200-746-9 (EC Index-No.) 603-003-00-0	1 - 3	Flam. Liq. 2, H225 Eye Dam. 1, H318 STOT SE 3, H336

Full text of H-statements: see section 16

SECTION 4: First aid measures
4.1. Description of first aid measures
First-aid measures general : Call a poison center or a doctor if you feel unwell.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.

First-aid measures after skin contact : Rinse skin with water/shower. Take off immediately all contaminated clothing. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

First-aid measures after ingestion : Rinse mouth. Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/effects after inhalation : May cause respiratory irritation.

Symptoms/effects after skin contact : Irritation.

Symptoms/effects after eye contact : Serious damage to eyes.

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 spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid and vapour.

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.

Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

butan-1-ol; n-butanol (71-36-3)		
United Kingdom	Local name	Butan-1-ol
United Kingdom	WEL STEL (mg/m³)	154 mg/m³ Butan-1-ol; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (ppm)	50 ppm Butan-1-ol; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	Remark (WEL)	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)

N-PROPANOL (71-23-8)		
United Kingdom	Local name	Propan-1-ol
United Kingdom	WEL TWA (mg/m³)	500 mg/m³
United Kingdom	WEL TWA (ppm)	200 ppm

N-PROPANOL (71-23-8)		
United Kingdom	WEL STEL (mg/m³)	625 mg/m³
United Kingdom	WEL STEL (ppm)	250 ppm
United Kingdom	Remark (WEL)	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)

ISO BUTYL ALCOHOL (78-83-1)		
United Kingdom	Local name	2-Methylpropan-1-ol
United Kingdom	WEL TWA (mg/m³)	154 mg/m³
United Kingdom	WEL TWA (ppm)	50 ppm
United Kingdom	WEL STEL (mg/m³)	231 mg/m³
United Kingdom	WEL STEL (ppm)	75 ppm

3-methyl-1-butanol (123-51-3)		
United Kingdom	Local name	3-Methylbutan-1-ol
United Kingdom	WEL TWA (mg/m³)	366 mg/m³ 3-Methylbutan-1-ol; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	100 ppm 3-Methylbutan-1-ol; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m³)	458 mg/m³ 3-Methylbutan-1-ol; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (ppm)	125 ppm 3-Methylbutan-1-ol; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:
Protective gloves

Eye protection:
Safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
[In case of inadequate ventilation] wear respiratory protection.

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: dark brown.
Odour	: Strong odour.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: 133 °C

Flash point	: 49.8 °C
Auto-ignition temperature	: 300 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: 433 mm Hg
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 0.835 g/cm³
Solubility	: Water: < 1 g/ml
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Lower explosive limit (LEL)	: 1.4 vol %
Upper explosive limit (UEL)	: 11.2 vol %

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity
10.1. Reactivity
Flammable liquid and vapour.
10.2. Chemical stability
Stable under normal conditions.
10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.
10.4. Conditions to avoid
Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.
10.5. Incompatible materials
Acids. Oxidizing agent. Reducing agents.
10.6. Hazardous decomposition products
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information
11.1. Information on toxicological effects
Acute toxicity (oral)	: Oral: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Inhalation:dust,mist: Harmful if inhaled.

SENFROTH 38	
LD50 oral rat	1470 mg/kg
ATE CLP (dust,mist)	3.173 mg/l/4h

butan-1-ol; n-butanol (71-36-3)	
LD50 oral rat	790 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Literature; 2293 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rabbit	3400 mg/kg (Rabbit; Experimental value; OECD 402: Acute Dermal Toxicity; 3430 mg/kg bodyweight; Rabbit)
LC50 inhalation rat (mg/l)	24 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	8000 ppm/4h (Rat)

ISO BUTYL ALCOHOL (78-83-1)	
LD50 oral rat	> 2830 mg/kg bodyweight (Rat; OECD 401: Acute Oral Toxicity; Experimental value; 3350 mg/kg bodyweight; Rat; OECD 401: Acute Oral Toxicity; Experimental value)
LD50 oral	> 2830 mg/kg bodyweight
LD50 dermal rabbit	2460 mg/kg bodyweight (Rabbit; Experimental value; OECD 402: Acute Dermal Toxicity; > 2000 mg/kg bodyweight; Rabbit; Experimental value; OECD 402: Acute Dermal Toxicity)
LD50 dermal	2460 mg/kg bodyweight

LC50 inhalation rat (Dust/Mist - mg/l/4h)	> 6500 mg/l/4h

pentan-2-ol (6032-29-7)	
LD50 oral rat	> 2000 mg/kg bodyweight (Rat; OECD 423: Acute Oral Toxicity – Acute Toxic Class Method; Experimental value)

3-methyl-1-butanol (123-51-3)	
LD50 oral rat	> 2000 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value; >5000 mg/kg bodyweight; Rat)
LD50 dermal rabbit	3216 mg/kg (Rabbit; Experimental value; 3216 mg/kg bodyweight; Rabbit)

2-methyl-1-butanol (137-32-6)	
LD50 oral rat	4010 mg/kg (Rat)
LD50 dermal rabbit	2902 mg/kg (Rabbit)

1-pentanol (71-41-0)	
LD50 oral rat	3645 mg/kg (Rat; Equivalent or similar to OECD 401; Experimental value)
LD50 dermal rabbit	2292 mg/kg (Rabbit; Experimental value; Equivalent or similar to OECD 402)

1-hexanol (111-27-3)	
LD50 oral rat	720 mg/kg (Rat)
LD50 dermal rabbit	2540 mg/kg (Rabbit)

SENKOL 700 (141-98-7)	
LD50 oral rat	568 mg/kg
LD50 dermal rat	2000 mg/kg
LC50 inhalation rat (Dust/Mist - mg/l/4h)	20 mg/l/4h

Skin corrosion/irritation : Severe skin irritant
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Reproductive toxicity : Not classified
STOT-single exposure : May cause respiratory irritation.
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Ecology - water : Harmful to aquatic life.
Acute aquatic toxicity : Not classified
Chronic aquatic toxicity : Not classified

butan-1-ol; n-butanol (71-36-3)	
LC50 fish 1	1376 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Pimephales promelas; Static system; Fresh water; Experimental value)
EC50 Daphnia 1	1328 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)

ISO BUTYL ALCOHOL (78-83-1)	
LC50 fish 1	1430 mg/l (LC50; Other; 96 h; Pimephales promelas; Flow-through system; Fresh water; Experimental value)
EC50 Daphnia 1	1100 mg/l (EC50; ASTM; 48 h; Daphnia pulex; Static system; Fresh water; Experimental value)
EC50 other aquatic organisms 1	583 mg/l EC50 waterflea (48 h)
Threshold limit algae 1	593 mg/l (EC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system; Fresh water; Experimental value)
Threshold limit algae 2	< 53 mg/l (NOEC; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system; Fresh water; Experimental value)

3-methyl-1-butanol (123-51-3)	
LC50 fish 1	700 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Salmo gairdneri; Static system; Fresh water; Experimental value)
EC50 Daphnia 1	255 mg/l (EC50; DIN 38412-11; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
Threshold limit algae 2	> 500 mg/l (EC50; DIN 38412-9; 72 h; Scenedesmus subspicatus; Static system; Fresh water; Experimental value)

1-pentanol (71-41-0)	
LC50 fish 1	400 mg/l (LC0; Other; 96 h; Brachydanio rerio; Static system; Fresh water; Experimental value)
LC50 fish 2	530 mg/l (LC50; Other; 96 h; Brachydanio rerio; Static system; Fresh water; Experimental value)
EC50 Daphnia 2	341 mg/l (EC50; EU Method C.2; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
Threshold limit algae 1	260 mg/l (Toxicity threshold; Other; 8 days; Scenedesmus quadricauda; Static system; Fresh water; Experimental value)

1-hexanol (111-27-3)	
LC50 fish 1	144 mg/l (LC50; 96 h; Brachydanio rerio)
EC50 Daphnia 1	201 mg/l (EC50; 24 h)
Threshold limit algae 1	30 mg/l (EC0; 168 h)

SENKOL 700 (141-98-7)	
LC50 fish 1	9640 mg/l Fathead minnow
LC50 fish 2	63 mg/l Danio rerio
EC50 Daphnia 1	60 mg/l
EC50 72h algae (1)	20.8 mg/l

12.2. Persistence and degradability

butan-1-ol; n-butanol (71-36-3)	
Persistence and degradability	Readily biodegradable in water. Low potential for adsorption in soil. Photolysis in the air.
Biochemical oxygen demand (BOD)	1.1 - 1.92 g O_2/g substance
Chemical oxygen demand (COD)	2.46 g O_2/g substance
ThOD	2.59 g O_2/g substance
BOD (% of ThOD)	0.33 - 0.79

ISO BUTYL ALCOHOL (78-83-1)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Low potential for adsorption in soil. Photodegradation in the air.

pentan-2-ol (6032-29-7)	
Persistence and degradability	Biodegradability in water: no data available. No (test)data on mobility of the substance available.
ThOD	2.72 g O_2/g substance

3-methyl-1-butanol (123-51-3)	
Persistence and degradability	Readily biodegradable in water. Highly mobile in soil.
Biochemical oxygen demand (BOD)	1.6 g O_2/g substance
Chemical oxygen demand (COD)	2.44 g O_2/g substance
ThOD	2.74 g O_2/g substance
BOD (% of ThOD)	0.59

2-methyl-1-butanol (137-32-6)	
Persistence and degradability	Readily biodegradable in water.
ThOD	2.72 g O_2/g substance

1-pentanol (71-41-0)	
Persistence and degradability	Readily biodegradable in water. Readily biodegradable in water in anaerobic conditions. Highly mobile in soil.
Biochemical oxygen demand (BOD)	1.28 g O_2/g substance
ThOD	2.73 g O_2/g substance
BOD (% of ThOD)	0.47

1-hexanol (111-27-3)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil.
Chemical oxygen demand (COD)	2.6 g O_2/g substance
ThOD	2.8 g O_2/g substance
BOD (% of ThOD)	0.28

SENKOL 700 (141-98-7)	
Persistence and degradability	Not biodegradable.

12.3. Bioaccumulative potential

butan-1-ol; n-butanol (71-36-3)	
BCF other aquatic organisms 1	3.16 (BCF; BCFWIN)
Log Pow	1 (Experimental value; OECD 117: Partition Coefficient (n-octanol/water), HPLC method; 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

ISO BUTYL ALCOHOL (78-83-1)	
Log Pow	1 (Practical experience/observation; 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

pentan-2-ol (6032-29-7)	
Log Pow	1.19 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

3-methyl-1-butanol (123-51-3)	
Log Pow	1.35 (Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

2-methyl-1-butanol (137-32-6)	
Log Pow	1.29 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

1-pentanol (71-41-0)	
Log Pow	1.16 - 1.56 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

1-hexanol (111-27-3)	
Log Pow	2.03 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

butan-1-ol; n-butanol (71-36-3)	
Surface tension	0.025 N/m (20 °C)
Log Koc	Koc,PCKOCWIN v1.66; 2.443; Calculated value; log Koc; PCKOCWIN v1.66; 0.388; Calculated value
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.

ISO BUTYL ALCOHOL (78-83-1)	
Surface tension	0.0697 N/m (20 °C)
Log Koc	log Koc,SRC PCKOCWIN v1.66; 0.31; Calculated value

pentan-2-ol (6032-29-7)	
Surface tension	0.024 N/m (20 °C)

3-methyl-1-butanol (123-51-3)	
Surface tension	0.024 N/m (20 °C)
Log Koc	log Koc,SRC PCKOCWIN v2.0; 0.73; QSAR

2-methyl-1-butanol (137-32-6)	
Surface tension	0.025 N/m (25 °C)

1-pentanol (71-41-0)	
Surface tension	0.026 N/m (20 °C)
Log Koc	Koc,SRC PCKOCWIN v2.0; 6,33; QSAR; log Koc; SRC PCKOCWIN v2.0; 0,8; QSAR

1-hexanol (111-27-3)	
Surface tension	0.026 N/m (25 °C)

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Additional information : Flammable vapours may accumulate in the container.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : 1993

UN-No. (IMDG) : 1993

UN-No. (IATA) : 1993

14.2. UN proper shipping name

Proper Shipping Name (ADR) : FLAMMABLE LIQUID, N.O.S.

Proper Shipping Name (IMDG) : FLAMMABLE LIQUID, N.O.S.

Proper Shipping Name (IATA) : Flammable liquid, n.o.s.

Transport document description (ADR) : UN 1993 FLAMMABLE LIQUID, N.O.S. (SENFROTH 38), 3, III, (D/E)

Transport document description (IMDG) : UN 1993 FLAMMABLE LIQUID, N.O.S., 3, III

Transport document description (IATA) : UN 1993 Flammable liquid, n.o.s., 3, III

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 3

Danger labels (ADR) : 3

:

IMDG

Transport hazard class(es) (IMDG) : 3

Danger labels (IMDG) : 3

:

IATA

Transport hazard class(es) (IATA) : 3

Hazard labels (IATA) : 3

:

14.4. Packing group

Packing group (ADR) : III

Packing group (IMDG) : III

Packing group (IATA) : III

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

14.6. Special precautions for user

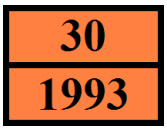
Overland transport

Classification code (ADR) : F1

Special provisions (ADR) : 274, 601, 640E

Limited quantities (ADR) : 5l

Excepted quantities (ADR) : E1

Packing instructions (ADR)	: P001, IBC03, LP01, R001
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T4
Portable tank and bulk container special provisions (ADR)	: TP1, TP29
Tank code (ADR)	: LGBF
Vehicle for tank carriage	: FL
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12
Special provisions for carriage - Operation (ADR)	: S2
Hazard identification number (Kemler No.)	: 30
Orange plates	: 
Tunnel restriction code (ADR)	: D/E
EAC code	: •3YE

Transport by sea

Special provisions (IMDG)	: 223, 274, 955
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1, TP29
EmS-No. (Fire)	: F-E
EmS-No. (Spillage)	: S-E
Stowage category (IMDG)	: A

Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y344
PCA limited quantity max net quantity (IATA)	: 10L
PCA packing instructions (IATA)	: 355
PCA max net quantity (IATA)	: 60L
CAO packing instructions (IATA)	: 366
CAO max net quantity (IATA)	: 220L
Special provisions (IATA)	: A3
ERG code (IATA)	: 3L

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances
Directive 2012/18/EU (SEVESO III)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Full text of H- and EUH-statements:	
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

SDS EU (REACH Annex II)

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