according to REACH Regulation UK SI 2019/758, as amended, and UK SI 2020 Stophäfer GmbH

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FSG-Refrigerant, Type KM 1 PLUS

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

1.1. Product identifier Trade name/designation:

FSG-Refrigerant, Type KM 1 PLUS

Article No.:

KM35000

CWW3-X3N7-P005-W6T5

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

Refrigerant

Relevant identified uses:

Sector of uses [SU]

- SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites Product Categories [PC]
- Product Categories [P PC 16: Heat transfer fluids

1.3. Details of the supplier of the safety data sheet

Manufacturer:

FSG Schäfer GmbH Boschstraße 14 48703 Stadtlohn GERMANY **Telephone:** +49 (0) 25 63 - 93 95 - 0 **Telefax:** +49 (0) 25 63 - 93 95 - 25 **E-mail:** verkauf@fsg-schaefer.de **Website:** www.fsg-schaefer.de

E-mail (competent person): sdb@fsg-schaefer.de Only for information: National Poisons Information Service (Birmingham Unit): 844 892 0111

1.4. Emergency telephone number

24h: Emergency Action: In the event of a medical enquiry involving this product, please contact your doctor or local hospital accident and emergencydepartment., Office FSG: +49 (0) 2563 93950. (Only available during office hours.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567

Hazard classes and hazard categories	Hazard statements	Classification procedure
flammable liquids (Flam. Liq. 2)	H225: Highly flammable liquid and vapour.	
Serious eye damage/eye irritation (Eye Irrit. 2)	H319: Causes serious eye irritation.	

according to REACH Regulation UK SI 2019/758, as amended, and UK SI 2020 Stophäfer GmbH

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2.2. Label elements

Labelling according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567 Hazard pictograms:

GHS02	GHS07
Flame	Exclamation mark
www.ml	

Signal word: Danger

Hazard statements	for physical hazards
H225	Highly flammable liquid and vapour.

Hazard statements for health hazards

H319 Causes serious eye irritation.

Supplemental hazard information: none

Precautionary statements Prevention			
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.		
P240	Ground and bond container and receiving equipment.		
P243	Take action to prevent static discharges.		
P280 Wear protective gloves/protective clothing/eye protection/face protection.			
-			

Precautionary statements Response

P305 + P351 + P338IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present
and easy to do. Continue rinsing.P337 + P313If eye irritation persists: Get medical advice/attention.

Special rules for supplemental label elements for certain mixtures:

85,0 % percent of the mixture consists of ingredient(s) of unknown acute toxicity (dermal).

18,4 % percent of the mixture consists of ingredient(s) of unknown acute toxicity (inhalative).

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Description:

Mixture of following listed substances with nonhazardous additions.

Hazardous ingredients / Hazardous impurities / Stabilisers:

azardous ingreatents / nazardous impartites / otabilisersi		
Substance name Classification according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567	Concentration	
ethanol Flam. Liq. 2 (H225)	48 - < 100 weight-%	
propan-2-ol Eye Irrit. 2 (H319), Flam. Liq. 2 (H225), STOT SE 3 (H336)	7 - ≤ 14 weight-%	
butanone Eye Irrit. 2 (H319), Flam. Liq. 2 (H225), STOT SE 3 (H336)	1 - < 3 weight-%	
	Classification according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567 ethanol Flam. Liq. 2 (H225) Danger propan-2-ol Eye Irrit. 2 (H319), Flam. Liq. 2 (H225), STOT SE 3 (H336) Tomager butanone Eye Irrit. 2 (H319), Flam. Liq. 2 (H225), STOT SE 3 (H336)	

according to REACH Regulation UK SI 2019/758, as amended, and UK SI 2020, Srohäfer GmbH

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SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove victim out of the danger area. Remove contaminated, saturated clothing. If unconscious but breathing normally, place in recovery position and seek medical advice. Do not leave affected person unattended.

Following inhalation:

Provide fresh air. In case of respiratory tract irritation, consult a physician.

In case of skin contact:

IF ON SKIN: Gently wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. After contact with skin, wash immediately with plenty of water and soap.

After eye contact:

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Following ingestion:

Rinse mouth. Get medical advice/attention if you feel unwell. Let 1 glass of water be drunken in little sips (dilution effect).

Self-protection of the first aider:

Use personal protection equipment.

4.2. Most important symptoms and effects, both acute and delayed Serious eye damage/eye irritation.

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 jet, alcohol resistant foam, Extinguishing powder, Carbon dioxide (CO2). Fire extinguishers Fire class B.

Unsuitable extinguishing media:

Full water jet

5.2. Special hazards arising from the substance or mixture

Highly flammable, Combustible.

Hazardous combustion products:

In case of fire may be liberated: Carbon dioxide (CO2), Carbon monoxide Pyrolysis products, toxic, carbon black.

In case of fire: Gases/vapours, toxic.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

5.4. Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Remove persons to safety.

Protective equipment:

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

according to REACH Regulation UK SI 2019/758, as amended, and UK SI 2020, Srohäfer GmbH

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6.1.2. For emergency responders

Personal protection equipment:

Personal protection equipment: see section 8.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment:

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up:

Clean with detergents. Avoid solvent cleaners. Water (with cleaning agent).

6.4. Reference to other sections

Safe handling: see section 7. Personal protection equipment: see section 8. Disposal: see section 13.

6.5. Additional information

Use appropriate container to avoid environmental contamination.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Do not breathe gas/fumes/vapour/spray. Repeated exposure may cause skin dryness or cracking. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use explosion-proof machinery, apparatus, ventilation facilities, tools etc. Wear personal protection equipment (refer to section 8).

Fire prevent measures:

Highly flammable, Take precautionary measures against static discharge. Keep away from sources of ignition - No smoking.

Measures to prevent aerosol and dust generation:

If possible, do not use for spraying. Wipe for cleaning

Environmental precautions:

Discharge into the environment must be avoided.

Advices on general occupational hygiene

Wash hands before breaks and after work. After cleaning apply high-fat content skin care cream. When using do not eat, drink, smoke, sniff. Avoid contact with skin, eyes and clothes.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

Keep container tightly closed in a cool, well-ventilated place.

Packaging materials:

Material, solvent-resistant, Keep/Store only in original container.

Requirements for storage rooms and vessels:

Soils have to conform to the "Guidelines for avoidance of ignition hazards due to electrostatic charges (TRGS 727)".

Hints on storage assembly:

Keep away from combustible material. Do not store together with:

Combustible substances of acute toxicity, category 1 and 2 / very toxic substances

Non-combustible substances of acute toxicity, category 1 and 2 / very toxic substances

Combustible substances of acute toxicity, category 3 / hazardous substances that are toxic or produce chronic effects

Non-combustible substances of acute toxicity, category 3 / hazardous substances that are toxic or produce chronic effects

Storage class (TRGS 510, Germany): 3 - Flammable liquids

according to REACH Regulation UK SI 2019/758, as amended, and UK SI $\overline{2020}$ $\overline{302}$ häfer GmbH

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Further information on storage conditions:

Protect from sunlight. Store in a well-ventilated place.

7.3. Specific end use(s)

Recommendation:

Washing and cleaning products, Professional use of general surface cleaning products, If possible, do not use for spraying.

Industrial sector specific solutions:

Anti-corrosive paints, containing solvents, aromatics removed

GISCODE:

BS40

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Occupational exposure limit values

Limit value type (country of origin)	Substance name	 Long-term occupational exposure limit value Short-term occupational exposure limit value Instantaneous value Monitoring and observation processes Remark 	
IE	ethanol CAS No.: 64-17-5 EC No.: 200-578-6	② 1,000 ppm	
WEL (GB)	ethanol CAS No.: 64-17-5 EC No.: 200-578-6	① 1,000 ppm (1,920 mg/m³)	
IE	propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	 200 ppm 400 ppm (may be absorbed through the skin) Sk 	
WEL (GB)	propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	 400 ppm (999 mg/m³) 500 ppm (1,250 mg/m³) 	
ΙE	butanone CAS No.: 78-93-3 EC No.: 201-159-0	 200 ppm (600 mg/m³) 300 ppm (900 mg/m³) (may be absorbed through the skin) Sk, IOELV 	
IOELV (EU)	butanone CAS No.: 78-93-3 EC No.: 201-159-0	 200 ppm (600 mg/m³) 300 ppm (900 mg/m³) 	
WEL (GB)	butanone CAS No.: 78-93-3 EC No.: 201-159-0	 200 ppm (600 mg/m³) 300 ppm (899 mg/m³) 	

8.1.2. Biological limit values

No data available

8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	 DNEL type Exposure route
ethanol CAS No.: 64-17-5 EC No.: 200-578-6	950 mg/m ³	 DNEL worker Long-term - inhalation, systemic effects
ethanol CAS No.: 64-17-5 EC No.: 200-578-6	114 mg/m³	 DNEL Consumer Long-term - inhalation, systemic effects
ethanol CAS No.: 64-17-5 EC No.: 200-578-6	1,900 mg/m ³	 DNEL worker Acute - inhalation, local effects

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Substance name	DNEL value	① DNEL type	
	050 ()	② Exposure route	
ethanol CAS No.: 64-17-5	950 mg/m ³	① DNEL Consumer	
EC No.: 200-578-6		② Acute - inhalation, local effects	
ethanol	343 mg/kg bw/	① DNEL worker	
CAS No.: 64-17-5	day	 2 Long-term - dermal, systemic effects 	
EC No.: 200-578-6			
ethanol	206 mg/kg bw/		
CAS No.: 64-17-5 EC No.: 200-578-6	day	② Long-term - dermal, systemic effects	
ethanol	87 mg/kg bw/	① DNEL worker	
CAS No.: 64-17-5	day	 Divide worker Long-term - oral, systemic effects 	
EC No.: 200-578-6	-	C Long-term - oral, systemic enects	
ethanol	87 mg/kg bw/	① DNEL worker	
CAS No.: 64-17-5	day	② Acute – oral, systemic effects	
EC No.: 200-578-6	E00 m m/m 3		
propan-2-ol CAS No.: 67-63-0	500 mg/m ³	① DNEL worker	
EC No.: 200-661-7		② Long-term – inhalation, systemic effects	
propan-2-ol	89 mg/m ³	1 DNEL Consumer	
CAS No.: 67-63-0		 2 Long-term – inhalation, systemic effects 	
EC No.: 200-661-7			
propan-2-ol CAS No.: 67-63-0	319 mg/kg	① DNEL Consumer	
EC No.: 200-661-7		② Long-term - dermal, systemic effects	
propan-2-ol	888 mg/kg	① DNEL worker	
CAS No.: 67-63-0		 Divide worker Long-term - dermal, local effects 	
EC No.: 200-661-7			
propan-2-ol	26 mg/kg	① DNEL Consumer	
CAS No.: 67-63-0 EC No.: 200-661-7		② Long-term - oral, systemic effects	
butanone	600 mg/m ³		
CAS No.: 78-93-3	000 mg/m	DNEL worker	
EC No.: 201-159-0		② Long-term – inhalation, systemic effects	
butanone	106 mg/m ³	① DNEL Consumer	
CAS No.: 78-93-3		 2 Long-term - inhalation, systemic effects 	
EC No.: 201-159-0	1.1.01 #		
butanone CAS No.: 78-93-3	1,161 mg/kg bw/day	① DNEL worker	
EC No.: 201-159-0	5W/ddy	② Long-term - dermal, systemic effects	
outanone	412 mg/kg bw/	① DNEL Consumer	
CAS No.: 78-93-3	day	 Druce consumer Long-term - dermal, systemic effects 	
EC No.: 201-159-0			
butanone CAS No.: 78-93-3	31 mg/kg bw/	1 DNEL worker	
EC No.: 201-159-0	day	② Long-term - oral, systemic effects	
Substance name	PNEC Value	① PNEC type	
ethanol CAS No.: 64-17-5	0.96 mg/L	 PNEC aquatic, freshwater 	
EC No.: 200-578-6			
ethanol	0.76 mg/L	① PNEC aquatic, marine water	
CAS No.: 64-17-5			
EC No.: 200-578-6			
ethanol	580 mg/L	${f 1}$ PNEC sewage treatment plant	
CAS No.: 64-17-5			
EC No.: 200-578-6	3.6 ma/ka	1 DNEC and impart fractionator	
	3.6 mg/kg	① PNEC sediment, freshwater	

according to REACH Regulation UK SI 2019/758, as amended, and UK SI $\overline{2020}$ $\overline{30}$ häfer GmbH

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Substance name	PNEC Value	① PNEC type	
ethanol CAS No.: 64-17-5 EC No.: 200-578-6	0.63 mg/kg	① PNEC soil, freshwater	
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	140.9 mg/L	① PNEC aquatic, freshwater	
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	140.9 mg/L	① PNEC aquatic, marine water	
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	2,251 mg/L	① PNEC sewage treatment plant	
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	552 mg/kg	1 PNEC sediment, freshwater	
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	28 mg/kg	① PNEC soil, freshwater	
butanone CAS No.: 78-93-3 EC No.: 201-159-0	55.8 mg/L	① PNEC aquatic, freshwater	
butanone CAS No.: 78-93-3 EC No.: 201-159-0	55.8 mg/L	① PNEC aquatic, marine water	
butanone CAS No.: 78-93-3 EC No.: 201-159-0	709 mg/L	① PNEC sewage treatment plant	
butanone CAS No.: 78-93-3 EC No.: 201-159-0	284.74 mg/kg	① PNEC sediment, freshwater	
butanone CAS No.: 78-93-3 EC No.: 201-159-0	284.7 mg/kg	① PNEC sediment, marine water	
butanone CAS No.: 78-93-3 EC No.: 201-159-0	1 g/kg	① PNEC secondary poisoning	
butanone CAS No.: 78-93-3 EC No.: 201-159-0	55.8 mg/L	① PNEC aquatic, intermittent release	
butanone CAS No.: 78-93-3 EC No.: 201-159-0	22.5 mg/kg	① PNEC soil, freshwater	

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. generation/formation of aerosols: Technical ventilation of workplace.

8.2.2. Personal protection equipment



Eye/face protection:

Eye glasses with side protection EN 166.

Skin protection:

In full conatct: Suitable material: Butyl caoutchouc (butyl rubber) >0,7 mm. Breakthrough time: >480 min.

In splash contact: Suitable material: Butyl caoutchouc (butyl rubber), NBR (Nitrile rubber), >0,4 mm. Breakthrough time: >120 min.

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Tested protective gloves must be worn EN ISO 374.

The following gloves may be used: Ultranitril 492, MAPA Professionnel & Nitril/Neopren Microflex 93-260 (EN374 (JKL), EN388 (2000); Kat.III; AQL 0,65).

In the case of wanting to use the gloves again, clean them before taking off and air them well.

Breakthrough times and swelling properties of the material must be taken into consideration.

Respiratory protection:

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

Filtering device with filter or ventilator filtering device of type: AX.

Thermal hazards:

Risk of explosion if heated under confinement.

Other protection measures:

Wear suitable protective clothing.

8.2.3. Environmental exposure controls

No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: Liquid	Colour: blue
Odour: Ethanol	

Safety relevant basis data

Parameter	Value	 Method
		② Remark
рН	7	
Melting point	not determined	
Freezing point	not determined	
Initial boiling point and boiling range	78 – 137 °C	
Decomposition temperature	not determined	
Flash point	12 °C	
Evaporation rate	not determined	
Auto-ignition temperature	not determined	
Upper/lower flammability or explosive limits	not determined	
Vapour pressure	not determined	
Vapour density	not determined	
Density	not determined	
Relative density	not determined	
Bulk density	not determined	
Water solubility	miscible	
Partition coefficient: n-octanol/water	not determined	
Dynamic viscosity	not determined	
Kinematic viscosity	not determined	

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapour.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

according to REACH Regulation UK SI 2019/758, as amended, and UK SI 2020 Stophäfer GmbH

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10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

10.5. Incompatible materials

Oxidising agent.

10.6. Hazardous decomposition products

In case of warming: Flammable solvent vapor mixtures are possible. Gases/vapours, toxic.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7

LD₅₀ oral: 5,050 mg/kg (Rat)

LD₅₀ dermal: 12,800 mg/m³ (Rabbit)

LC₅₀ Acute inhalation toxicity (gas): >25,000 mg/kg 6 h (Rat)

butanone CAS No.: 78-93-3 EC No.: 201-159-0

LD₅₀ oral: 2,740 mg/kg (Rat) Toxicology and Applied Pharmacology. Vol. 19, Pg. 699, 1971.

LD₅₀ dermal: 6,480 mg/kg (Rabbit) Shell Chemical Company. Vol. MSDS-5390-4,

Acute oral toxicity:

Based on available data, the classification criteria are not met.

Acute dermal toxicity:

Based on available data, the classification criteria are not met.

Acute inhalation toxicity:

Based on available data, the classification criteria are not met.

Skin corrosion/irritation:

Based on available data, the classification criteria are not met.

Serious eye damage/irritation:

Causes serious eye irritation.

Respiratory or skin sensitisation:

Based on available data, the classification criteria are not met.

Germ cell mutagenicity:

Based on available data, the classification criteria are not met. **Carcinogenicity:**

Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

STOT-single exposure:

Based on available data, the classification criteria are not met.

STOT-repeated exposure:

Based on available data, the classification criteria are not met.

Aspiration hazard:

Based on available data, the classification criteria are not met.

Additional information:

No data available

11.2. Information on other hazards

No data available

according to REACH Regulation UK SI 2019/758, as amended, and UK SI $\overline{2020}$ $\overline{30}$ häfer GmbH

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SECTION 12: Ecological information

12.1. Toxicity

propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7

LC₅₀: 9,640 mg/L 4 d (fish, Pimephales promelas (fathead minnow))

LC50: 9,714 mg/L 2 d (crustaceans, Daphnia magna (Big water flea))

NOEC: 250 mg/L 4 d (Algae/water plant, Tetrahymena thermophilia)

NOEC: 754 mg/L 2 d (Algae/water plant)

butanone CAS No.: 78-93-3 EC No.: 201-159-0

LC₅₀: 3,220 – 3,220 mg/L 4 d (fish, Pimephales promelas) Brooke, L.T., D.J. Call, D.L. Geiger, and C.E. Northcott 1984 Acute Toxicities of Organic Chemicals to Fathead Minnows (Pimephales promelas), Vol. 1. Center for Lake Superior Environmental Stud., Univ.of Wisconsin-Superior, Superior, WI :414

EC₅₀: 5,090 – 5,090 mg/L 2 d (crustaceans) Randall, T.L., and P.V. Knopp 1980. Detoxification of Specific Organic Substances by Wet Oxidation. J.Water Pollut.Control Fed. 52(8):2117-2130

EC₅₀: 2,029 mg/L 4 d (Algae/water plant) ECHA

NOEC: 68 mg/L 2 d (crustaceans) ECHA

12.2. Persistence and degradability

propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7

Biodegradation: Yes, rapidly

Remark: Empfohlener Wert der LOG KOW Datenbank

butanone CAS No.: 78-93-3 EC No.: 201-159-0

Biodegradation: Yes, rapidly

12.3. Bioaccumulative potential

propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7

Log Kow: 0.05

butanone CAS No.: 78-93-3 EC No.: 201-159-0

Log K_{OW}: 0.29

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7

Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII. butanone CAS No.: 78-93-3 EC No.: 201-159-0

Results of PBT and vPvB assessment: —

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Dispose according to legislation.

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product

14 06 03 * other solvents and solvent mixtures

*: Evidence for disposal must be provided.

Directive 2008/98/EC (Waste Framework Directive)

HP 3 Flammable

according to REACH Regulation UK SI 2019/758, as amended, and UK SI $\overline{2020}$

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Waste code packaging

15 01 02 Plastic packaging

Waste treatment options

Appropriate disposal / Product:

Dispose of waste according to applicable legislation. Consult the appropriate local waste disposal expert about waste disposal.

Appropriate disposal / Package:

Completely emptied packages can be recycled.

Other disposal recommendations:

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. Collect in closed and suitable containers for disposal.

13.2. Additional information

Return to Distributor ..

SECTION 14: Transport information

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1. UN number or	ID number	•	•
UN 1993	UN 1993	UN 1993	UN 1993
14.2. UN proper shi	pping name	^	
	FLAMMABLE LIQUID, N.O.S. (Ethanol, Isopropyl alcohol)	FLAMMABLE LIQUID, N.O.S. (Ethanol, Isopropyl alcohol)	FLAMMABLE LIQUID, N.O.S. (Ethanol, Isopropyl alcohol)
14.3. Transport haza	ard class(es)	•	•
3	3	3	3
14.4. Packing group		1	1
 		11	11
14.5. Environmenta	hazards		
No	No	No	No
14.6. Special precau	itions for user		
Special Provisions: 640D	Special Provisions: 640D	Special Provisions: 640D	Special Provisions: 640D
Limited quantity (LQ): 1 L	Limited quantity (LQ):	Limited quantity (LQ): 1 L	Limited quantity (LQ): $1 L$
Hazard identification number (Kemler No.): 33 Classification code:	Classification code: F1 Remark:	EmS-No.: F-E, S-E	
F1 Tunnel restriction code: (D/E)			
Remark:			

14.7. Maritime transport in bulk according to IMO instruments not determined

Additional information:

according to REACH Regulation UK SI 2019/758, as amended, and UK SI 2020 Stophäfer GmbH

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SECTION 15: Regulatory information

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

15.1.1. EU legislation

Restrictions on use:

Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. According to directive 94/33/EC, juveniles are only allowed to handle this product as long as all effects of dangerous substances are prevented.

Other regulations (EU):

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive], Hazard categories:

• P5a Flammable Liquids, Category 1 or 2

- P5b Flammable liquids
- P5c Flammable liquids of Categories 2 or 3, not covered by P5a and P5b

Directive 2004/42/EC on the limitation of emissions of volatile organic compounds:

Volatile organic compounds (VOC) content in percent by weight: 96.7 weight-%

15.1.2. National regulations

IGB] National regulations

Other regulations, restrictions and prohibition regulations

Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS) Regulation 850/2004/EC on persistent organic pollutants (POP) Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)

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

No data available

16.2. Abbreviations and acronyms

For abbreviations and acronyms, see ECHA: Guidance on information requirements and chemical safety assessment, Chapter R.20 (list of terms and abbreviations).

16.3. Key literature references and sources for data

No data available

16.4. Classification for mixtures and used evaluation method according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567

Hazard classes and hazard categories	Hazard statements	Classification procedure
flammable liquids (Flam. Liq. 2)	H225: Highly flammable liquid and vapour.	
Serious eye damage/eye irritation (Eye Irrit. 2)	H319: Causes serious eye irritation.	

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements		
H225	Highly flammable liquid and vapour.	
H319	Causes serious eye irritation.	
H336	May cause drowsiness or dizziness.	
Supplemental hazard information		
EUH066	Repeated exposure may cause skin dryness or cracking.	

16.6. Training advice

No data available

according to REACH Regulation UK SI 2019/758, as amended, and UK SI $\overline{2020}$ $\overline{30}$ häfer GmbH

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16.7. Additional information

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.