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

1.1. Product identifier

Product form : Mixture
Trade name/designation : Klare Sicht Winter Concentrate
Product group : Trade product
Document no. : 803xxx

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Detergent
De-icer
Anti-freezing agents

1.2.2. Uses advised against

No data available

1.3. Details of the supplier of the safety data sheet

EUROLUB GmbH
Freisinger Strasse 25-27
85386 Eching / Germany
T +49-8165 95 91-0
Info@eurolub.com

1.4. Emergency telephone number

Country	Official advisory body	Address	Emergency number
Ireland	National Poisons Information Centre Beaumont Hospital	Beaumont Hospital Beaumont Road 9 Dublin	+353 1 809 21 66 (public, 8am - 10pm, 7/7) +353 01 809 2566 (Professionals, 24/7)
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre, Wolfson Unit	Claremont Place Newcastle-upon-Tyne NE1 4LP Newcastle	0844 892 0111 (UK only, Monday to Friday, 08.00 to 18.00 hours, healthcare professionals only)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

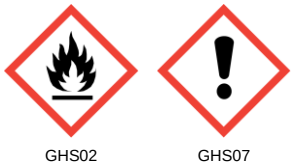
Flam. Liq. 3 H226
Eye Irrit. 2 H319

Full text of hazard classes and H-statements : see section 16

2.2. Label elements

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

Hazard pictograms :



GHS02 GHS07

Signal word : Warning

Hazard statements : H226 - Flammable liquid and vapour.
H319 - Causes serious eye irritation.

Precautionary statements : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P240 - Ground/bond container and receiving equipment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical advice/attention.

2.3. Other hazards

Other hazards : PBT/vPvB data : The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Substance name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Ethanol	(CAS No) 64-17-5 (EC no) 200-578-6 (EC Index) 603-002-00-5 (REACH-no) 01-2119457610-43-0122	51 - 54	Flam. Liq. 2, H225 Eye Irrit. 2, H319
Ethylene glycol	(CAS No) 107-21-1 (EC no) 203-473-3 (EC Index) 603-027-00-1	3,5 - 6	Acute Tox. 4 (Oral), H302
Propan-2-ol	(CAS No) 67-63-0 (EC no) 200-661-7 (EC Index) 603-117-00-0	< 1	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336

Specific concentration limits:

Substance name	Product identifier	Specific concentration limits
Ethanol	(CAS No) 64-17-5 (EC no) 200-578-6 (EC Index) 603-002-00-5 (REACH-no) 01-2119457610-43-0122	(C >= 50) Eye Irrit. 2, H319

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

Additional advice : First aider: Pay attention to self-protection. See also section 8. Never give anything by mouth to an unconscious person or a person with cramps. Show this safety data sheet to the doctor in attendance. Treat symptomatically. In case of doubt or persistent symptoms, consult always a physician.

Inhalation : Keep at rest. Provide fresh air. In case of doubt or persistent symptoms, consult always a physician.

Skin contact : After contact with skin, wash immediately with plenty of water and soap. In case of doubt or persistent symptoms, consult always a physician.

Eye contact : Remove contact lenses. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. In case of doubt or persistent symptoms, consult always a physician.

In case of ingestion : Do NOT induce vomiting. Rinse mouth immediately and drink plenty of water. Get medical advice/attention.

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

Inhalation : May cause respiratory irritation. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Skin contact : May be irritating.

Eye contact : Irritating to eyes.

Ingestion : May cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

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

In case of doubt or persistent symptoms, consult always a physician.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray, Alcohol resistant foam, Carbon dioxide, Dry extinguishing powder.

Unsuitable extinguishing media : Strong water jet.

5.2. Special hazards arising from the substance or mixture

Specific hazards : Vapours can form explosive mixtures with air. Vapours are heavier than air and may spread along floors. Vapours can travel considerable distances to a source of ignition where they can ignite, flash back, or explode. Do not allow run-off from fire-fighting to enter drains or water courses. Dispose of waste in accordance with environmental legislation. Hazardous decomposition products COx.

5.3. Advice for firefighters

Firefighting instructions : Special protective equipment for firefighters. Use water spray or fog for cooling exposed containers. In case of fire: Wear self-contained breathing apparatus. Evacuate personnel to a safe area.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

For non-emergency personnel : Evacuate personnel to a safe area. Stay upwind/keep distance from source. Provide adequate ventilation. Use personal protective equipment as required. Concerning personal protective equipment to use, see section 8. Avoid contact with skin, eyes and clothing. Do not breathe vapour/aerosol. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Remove all sources of ignition. Ensure equipment is adequately earthed. Use explosion-proof machinery, apparatus, ventilation facilities, tools etc. Use only non-sparking tools.

6.1.2. For emergency responders

For emergency responders : Ensure procedures and training for emergency decontamination and disposal are in place. Concerning personal protective equipment to use, 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

Methods for cleaning up : Stop leak if safe to do so. Clean-up methods - small spillage: : Leave to vapourize. Ventilate the area. Clean-up methods - large spillage: : Dam up. Take up liquid spill into absorbent material, e.g.: sand, earth, vermiculite or powdered limestone. Collect in closed and suitable containers for disposal. Large spills should be collected mechanically (remove by pumping) for disposal. Dispose of as special waste in compliance with local and national regulations. Site should have a spill plan to ensure that adequate safeguards are in place to minimize the impact of episodic releases.

6.4. Reference to other sections

Reference to other sections: 8 & 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Provide adequate ventilation. Use personal protective equipment as required. Concerning personal protective equipment to use, see section 8. Avoid contact with skin, eyes and clothing. Do not breathe vapour/aerosol. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ensure equipment is adequately earthed. Take any precaution to avoid mixing with incompatible materials. See also section 10. Ensure proper process control to avoid excess waste discharge (temperature, concentration, pH, time). After use replace the closing cap immediately. Do not allow to enter into surface water or drains.

Hygiene measures : Keep good industrial hygiene. Wash hands and face before breaks and immediately after handling of the product. Keep work clothes separately. Take off contaminated clothing. Keep away from food, drink and animal feedingstuffs. When using do not eat, drink or smoke.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not store near or with any of the incompatible materials listed in section 10.

Packaging materials : Keep/Store only in original container. Recommended packaging materials : Stainless steel. Titanium. Bronze. Iron. Carbon steel. Polypropylene. Neoprene. Nylon. Viton ®. Ceramic. Glass. Incompatible with : NR (natural rubber, natural latex), PVC (Polyvinyl chloride), Methyl methacrylate, plastics, polyamide, zinc, Brass, Aluminium.

7.3. Specific end use(s)

No data available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Ethylene glycol (107-21-1)		
EU	IOELV TWA (mg/m³)	52 mg/m³
EU	IOELV TWA (ppm)	20 ppm
EU	IOELV STEL (mg/m³)	104 mg/m³
EU	IOELV STEL (ppm)	40 ppm
Austria	MAK (mg/m³)	26 mg/m³
Austria	MAK (ppm)	10 ppm
Austria	MAK Short time value (mg/m³)	52 mg/m³
Austria	MAK Short time value (ppm)	20 ppm
Bulgaria	OEL TWA (mg/m³)	52 mg/m³
Bulgaria	OEL TWA (ppm)	20 ppm
Bulgaria	OEL STEL (mg/m³)	104 mg/m³
Bulgaria	OEL STEL (ppm)	40 ppm
Croatia	GVI (granična vrijednost izloženosti) (mg/m³)	52 mg/m³
Croatia	GVI (granična vrijednost izloženosti) (ppm)	20 ppm
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m³)	104 mg/m³
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (ppm)	40 ppm
Cyprus	OEL TWA (mg/m³)	52 mg/m³
Cyprus	OEL TWA (ppm)	20 ppm

Ethylene glycol (107-21-1)		
Cyprus	OEL STEL (mg/m³)	104 mg/m³
Cyprus	OEL STEL (ppm)	40 ppm
Czech Republic	Expoziční limity (PEL) (mg/m³)	50 mg/m³
Denmark	Grænseværdie (langvarig) (mg/m³)	26 mg/m³ 10 mg/m³ (vapor)
Denmark	Grænseværdie (langvarig) (ppm)	10 ppm
Estonia	OEL TWA (mg/m³)	52 mg/m³ (total concentration of aerosol and vapor)
Estonia	OEL TWA (ppm)	20 ppm (total concentration of aerosol and vapor)
Estonia	OEL STEL (mg/m³)	104 mg/m³ (total concentration of aerosol and vapor)
Estonia	OEL STEL (ppm)	40 ppm (total concentration of aerosol and vapor)
Finland	HTP-arvo (8h) (mg/m³)	50 mg/m³
Finland	HTP-arvo (8h) (ppm)	20 ppm
Finland	HTP-arvo (15 min)	100 mg/m³
Finland	HTP-arvo (15 min) (ppm)	40 ppm
France	VME (mg/m³)	52 mg/m³ (indicative limit-vapor)
France	VME (ppm)	20 ppm (indicative limit-vapor)
France	VLE (mg/m³)	104 mg/m³ (indicative limit-vapor)
France	VLE (ppm)	40 ppm (indicative limit-vapor)
Germany	TRGS 900 Occupational exposure limit value (mg/m³)	26 mg/m³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 900 Occupational exposure limit value (ppm)	10 ppm (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Gibraltar	OEL TWA (mg/m³)	52 mg/m³
Gibraltar	OEL TWA (ppm)	20 ppm
Gibraltar	OEL STEL (mg/m³)	104 mg/m³
Gibraltar	OEL STEL (ppm)	40 ppm
Greece	OEL TWA (mg/m³)	125 mg/m³ (vapor)
Greece	OEL TWA (ppm)	50 ppm (vapor)
Greece	OEL STEL (mg/m³)	125 mg/m³ (vapor)
Greece	OEL STEL (ppm)	50 ppm (vapor)
Hungary	AK-érték	52 mg/m³
Hungary	CK-érték	104 mg/m³
Ireland	OEL (8 hours ref) (mg/m³)	10 mg/m³ (particulate) 52 mg/m³ (vapour)
Ireland	OEL (8 hours ref) (ppm)	20 ppm (vapour)
Ireland	OEL (15 min ref) (mg/m3)	104 mg/m³ (vapour)
Ireland	OEL (15 min ref) (ppm)	40 ppm (particulate)
Italy	OEL TWA (mg/m³)	52 mg/m³
Italy	OEL TWA (ppm)	20 ppm
Italy	OEL STEL (mg/m³)	104 mg/m³

Ethylene glycol (107-21-1)		
Italy	OEL STEL (ppm)	40 ppm
Latvia	OEL TWA (mg/m³)	52 mg/m³
Latvia	OEL TWA (ppm)	20 ppm
Lithuania	IPRV (mg/m³)	25 mg/m³ (aerosol and vapor)
Lithuania	IPRV (ppm)	10 ppm (aerosol and vapor)
Lithuania	TPRV (mg/m³)	50 mg/m³ (aerosol and vapor)
Lithuania	TPRV (ppm)	20 ppm (aerosol and vapor)
Luxembourg	OEL TWA (mg/m³)	52 mg/m³
Luxembourg	OEL TWA (ppm)	20 ppm
Luxembourg	OEL STEL (mg/m³)	104 mg/m³
Luxembourg	OEL STEL (ppm)	40 ppm
Malta	OEL TWA (mg/m³)	52 mg/m³
Malta	OEL TWA (ppm)	20 ppm
Malta	OEL STEL (mg/m³)	104 mg/m³
Malta	OEL STEL (ppm)	40 ppm
Netherlands	Grenswaarde TGG 8H (mg/m³)	52 mg/m³ (fume) 10 mg/m³ (droplets)
Netherlands	Grenswaarde TGG 15MIN (mg/m³)	104 mg/m³
Poland	NDS (mg/m³)	15 mg/m³
Poland	NDSCh (mg/m³)	50 mg/m³
Portugal	OEL TWA (mg/m³)	52 mg/m³ (indicative limit value)
Portugal	OEL TWA (ppm)	20 ppm (indicative limit value)
Portugal	OEL STEL (mg/m³)	104 mg/m³ (indicative limit value)
Portugal	OEL STEL (ppm)	40 ppm (indicative limit value)
Portugal	OEL - Ceilings (mg/m³)	100 mg/m³ (aerosol only)
Romania	OEL TWA (mg/m³)	52 mg/m³
Romania	OEL TWA (ppm)	20 ppm
Romania	OEL STEL (mg/m³)	104 mg/m³
Romania	OEL STEL (ppm)	40 ppm
Slovakia	NPHV (priemerná) (mg/m³)	52 mg/m³
Slovakia	NPHV (priemerná) (ppm)	20 ppm
Slovakia	NPHV (Hraničná) (mg/m³)	104 mg/m³
Slovenia	OEL TWA (mg/m³)	52 mg/m³
Slovenia	OEL TWA (ppm)	20 ppm
Slovenia	OEL STEL (mg/m³)	104 mg/m³
Slovenia	OEL STEL (ppm)	40 ppm
Spain	VLA-ED (mg/m³)	52 mg/m³ (indicative limit value)
Spain	VLA-ED (ppm)	20 ppm (indicative limit value)
Spain	VLA-EC (mg/m³)	104 mg/m³
Spain	VLA-EC (ppm)	40 ppm
Sweden	nivågränsvärde (NVG) (mg/m³)	25 mg/m³ (aerosol and vapor)
Sweden	nivågränsvärde (NVG) (ppm)	10 ppm (aerosol and vapor)
Sweden	kortidsvärde (KTV) (mg/m³)	104 mg/m³ (aerosol and vapor)
Sweden	kortidsvärde (KTV) (ppm)	40 ppm (aerosol and vapor)

Ethylene glycol (107-21-1)		
United Kingdom	WEL TWA (mg/m³)	10 mg/m³ (particulates) 52 mg/m³ (vapour)
United Kingdom	WEL TWA (ppm)	20 ppm (vapour)
United Kingdom	WEL STEL (mg/m³)	104 mg/m³ (vapour) 30 mg/m³ (calculated-particulate)
United Kingdom	WEL STEL (ppm)	40 ppm (vapour)
Norway	Grenseverdier (AN) (mg/m³)	20 mg/m³ (equal to the standard for nuisance dust-dust) 52 mg/m³ (Total sum of limit values for both vapor and dust)
Norway	Grenseverdier (AN) (ppm)	52 ppm (Total sum of limit values for both vapor and dust-total dust and vapor)
Norway	Grenseverdier (Korttidsverdi) (mg/m3)	52 mg/m³ (Norm is based on the sum calculation for the total gas and particulate form of the substance-dust)
Norway	Grenseverdier (Korttidsverdi) (ppm)	20 ppm (Norm is based on the sum calculation for the total gas and particulate form of the substance)
Switzerland	VME (mg/m³)	26 mg/m³
Switzerland	VME (ppm)	10 ppm
Switzerland	VLE (mg/m³)	52 mg/m³
Switzerland	VLE (ppm)	20 ppm
Australia	TWA (mg/m³)	10 mg/m³ (particulate) 52 mg/m³ (vapour)
Australia	TWA (ppm)	20 ppm (vapour)
Australia	STEL (mg/m³)	104 mg/m³ (vapour)
Australia	STEL (ppm)	40 ppm (vapour)
Canada (Quebec)	PLAFOND (mg/m³)	127 mg/m³ (mist and vapour)
Canada (Quebec)	PLAFOND (ppm)	50 ppm (mist and vapour)
Japan	Exposure limits (ACGIH)	TWA (-),STEL (C 100 mg/m3 (H))
USA - ACGIH	ACGIH Ceiling (mg/m³)	100 mg/m³ (aerosol only)

Propan-2-ol (67-63-0)		
Austria	MAK (mg/m³)	500 mg/m³ (short time value for large casting)
Austria	MAK (ppm)	200 ppm (short time value for large casting)
Austria	MAK Short time value (mg/m³)	2000 mg/m³ 2000 mg/m³ (STEL for large casting valid till 12/31/2013)
Austria	MAK Short time value (ppm)	800 ppm 800 ppm (STEL for large casting valid till 12/31/2013)
Belgium	Limit value (mg/m³)	500 mg/m³
Belgium	Limit value (ppm)	200 ppm
Belgium	Short time value (mg/m³)	1000 mg/m³
Belgium	Short time value	400 ppm
Bulgaria	OEL TWA (mg/m³)	980,0 mg/m³
Bulgaria	OEL STEL (mg/m³)	1225,0 mg/m³
Croatia	GVI (granična vrijednost izloženosti) (mg/m³)	999 mg/m³
Croatia	GVI (granična vrijednost izloženosti) (ppm)	400 ppm
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m³)	1250 mg/m³

Propan-2-ol (67-63-0)		
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (ppm)	500 ppm
Czech Republic	Expoziční limity (PEL) (mg/m³)	500 mg/m³
Denmark	Grænseværdie (langvarig) (mg/m³)	490 mg/m³
Denmark	Grænseværdie (langvarig) (ppm)	200 ppm
Estonia	OEL TWA (mg/m³)	350 mg/m³
Estonia	OEL TWA (ppm)	150 ppm
Estonia	OEL STEL (mg/m³)	600 mg/m³
Estonia	OEL STEL (ppm)	250 ppm
Finland	HTP-arvo (8h) (mg/m³)	500 mg/m³
Finland	HTP-arvo (8h) (ppm)	200 ppm
Finland	HTP-arvo (15 min)	620 mg/m³
Finland	HTP-arvo (15 min) (ppm)	250 ppm
France	VLE (mg/m³)	980 mg/m³
France	VLE (ppm)	400 ppm
Germany	TRGS 900 Occupational exposure limit value (mg/m³)	500 mg/m³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 900 Occupational exposure limit value (ppm)	200 ppm (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 903 (BGW)	25 mg/l Parameter: Acetone - Medium: whole blood - Sampling time: end of shift 25 mg/l Parameter: Acetone - Medium: urine - Sampling time: end of shift
Greece	OEL TWA (mg/m³)	980 mg/m³
Greece	OEL TWA (ppm)	400 ppm
Greece	OEL STEL (mg/m³)	1225 mg/m³
Greece	OEL STEL (ppm)	500 ppm
Hungary	AK-érték	500 mg/m³
Hungary	CK-érték	2000 mg/m³
Ireland	OEL (8 hours ref) (ppm)	200 ppm
Ireland	OEL (15 min ref) (ppm)	400 ppm
Latvia	OEL TWA (mg/m³)	350 mg/m³
Lithuania	IPRV (mg/m³)	350 mg/m³
Lithuania	IPRV (ppm)	150 ppm
Lithuania	TPRV (mg/m³)	600 mg/m³
Lithuania	TPRV (ppm)	250 ppm
Poland	NDS (mg/m³)	900 mg/m³
Poland	NDSCh (mg/m³)	1200 mg/m³
Portugal	OEL TWA (ppm)	200 ppm
Portugal	OEL STEL (ppm)	400 ppm
Romania	OEL TWA (mg/m³)	200 mg/m³
Romania	OEL TWA (ppm)	81 ppm
Romania	OEL STEL (mg/m³)	500 mg/m³
Romania	OEL STEL (ppm)	203 ppm

Propan-2-ol (67-63-0)		
Slovakia	NPHV (priemerná) (mg/m³)	500 mg/m³
Slovakia	NPHV (priemerná) (ppm)	200 ppm
Slovakia	NPHV (Hraničná) (mg/m³)	1000 mg/m³
Slovenia	OEL TWA (mg/m³)	500 mg/m³
Slovenia	OEL TWA (ppm)	200 ppm
Slovenia	OEL STEL (mg/m³)	2000 mg/m³
Slovenia	OEL STEL (ppm)	800 ppm
Spain	VLA-ED (mg/m³)	500 mg/m³ (the partial or complete commercialization or use of this substance as a phytosanitary or biocide compound is prohibited)
Spain	VLA-ED (ppm)	200 ppm (the partial or complete commercialization or use of this substance as a phytosanitary or biocide compound is prohibited)
Spain	VLA-EC (mg/m³)	1000 mg/m³
Spain	VLA-EC (ppm)	400 ppm
Sweden	nivågränsvärde (NVG) (mg/m³)	350 mg/m³
Sweden	nivågränsvärde (NVG) (ppm)	150 ppm
Sweden	kortidsvärde (KTV) (mg/m³)	600 mg/m³
Sweden	kortidsvärde (KTV) (ppm)	250 ppm
United Kingdom	WEL TWA (mg/m³)	999 mg/m³
United Kingdom	WEL TWA (ppm)	400 ppm
United Kingdom	WEL STEL (mg/m³)	1250 mg/m³
United Kingdom	WEL STEL (ppm)	500 ppm
Norway	Grenseverdier (AN) (mg/m³)	245 mg/m³
Norway	Grenseverdier (AN) (ppm)	100 ppm
Norway	Grenseverdier (Korttidsverdi) (mg/m3)	245 mg/m³
Norway	Grenseverdier (Korttidsverdi) (ppm)	100 ppm
Switzerland	VME (mg/m³)	500 mg/m³
Switzerland	VME (ppm)	200 ppm
Switzerland	VLE (mg/m³)	1000 mg/m³
Switzerland	VLE (ppm)	400 ppm
Australia	TWA (mg/m³)	983 mg/m³
Australia	TWA (ppm)	400 ppm
Australia	STEL (mg/m³)	1230 mg/m³
Australia	STEL (ppm)	500 ppm
Canada (Quebec)	VECD (mg/m³)	1230 mg/m³
Canada (Quebec)	VECD (ppm)	500 ppm
Canada (Quebec)	VEMP (mg/m³)	985 mg/m³
Canada (Quebec)	VEMP (ppm)	400 ppm
USA - ACGIH	ACGIH TWA (ppm)	200 ppm
USA - ACGIH	ACGIH STEL (ppm)	400 ppm
USA - IDLH	US IDLH (ppm)	2000 ppm (10% LEL)
USA - NIOSH	NIOSH REL (TWA) (mg/m³)	980 mg/m³
USA - NIOSH	NIOSH REL (TWA) (ppm)	400 ppm
USA - NIOSH	NIOSH REL (STEL) (mg/m³)	1225 mg/m³

Propan-2-ol (67-63-0)		
USA - NIOSH	NIOSH REL (STEL) (ppm)	500 ppm
USA - OSHA	OSHA PEL (TWA) (mg/m³)	980 mg/m³
USA - OSHA	OSHA PEL (TWA) (ppm)	400 ppm

Ethanol (64-17-5)		
Austria	MAK (mg/m³)	1900 mg/m³
Austria	MAK (ppm)	1000 ppm
Austria	MAK Short time value (mg/m³)	3800 mg/m³
Austria	MAK Short time value (ppm)	2000 ppm
Belgium	Limit value (mg/m³)	1907 mg/m³
Belgium	Limit value (ppm)	1000 ppm
Bulgaria	OEL TWA (mg/m³)	1000 mg/m³
Croatia	GVI (granična vrijednost izloženosti) (mg/m³)	1900 mg/m³
Croatia	GVI (granična vrijednost izloženosti) (ppm)	1000 ppm
Czech Republic	Expoziční limity (PEL) (mg/m³)	1000 mg/m³
Denmark	Grænseværdie (langvarig) (mg/m³)	1900 mg/m³
Denmark	Grænseværdie (langvarig) (ppm)	1000 ppm
Estonia	OEL TWA (mg/m³)	1000 mg/m³
Estonia	OEL TWA (ppm)	500 ppm
Estonia	OEL STEL (mg/m³)	1900 mg/m³
Estonia	OEL STEL (ppm)	1000 ppm
Finland	HTP-arvo (8h) (mg/m³)	1900 mg/m³
Finland	HTP-arvo (8h) (ppm)	1000 ppm
Finland	HTP-arvo (15 min)	2500 mg/m³
Finland	HTP-arvo (15 min) (ppm)	1300 ppm
France	VME (mg/m³)	1900 mg/m³
France	VME (ppm)	1000 ppm
France	VLE (mg/m³)	9500 mg/m³
France	VLE (ppm)	5000 ppm
Germany	TRGS 900 Occupational exposure limit value (mg/m³)	960 mg/m³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 900 Occupational exposure limit value (ppm)	500 ppm (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Greece	OEL TWA (mg/m³)	1900 mg/m³
Greece	OEL TWA (ppm)	1000 ppm
Hungary	AK-érték	1900 mg/m³
Hungary	CK-érték	7600 mg/m³
Ireland	OEL (15 min ref) (ppm)	1000 ppm
Latvia	OEL TWA (mg/m³)	1000 mg/m³
Lithuania	IPRV (mg/m³)	1000 mg/m³
Lithuania	IPRV (ppm)	500 ppm
Lithuania	TPRV (mg/m³)	1900 mg/m³
Lithuania	TPRV (ppm)	1000 ppm
Netherlands	Grenswaarde TGG 8H (mg/m³)	260 mg/m³

Ethanol (64-17-5)		
Netherlands	Grenswaarde TGG 15MIN (mg/m³)	1900 mg/m³
Poland	NDS (mg/m³)	1900 mg/m³
Portugal	OEL TWA (ppm)	1000 ppm
Romania	OEL TWA (mg/m³)	1900 mg/m³
Romania	OEL TWA (ppm)	1000 ppm
Romania	OEL STEL (mg/m³)	9500 mg/m³
Romania	OEL STEL (ppm)	5000 ppm
Slovakia	NPHV (priemerná) (mg/m³)	960 mg/m³
Slovakia	NPHV (priemerná) (ppm)	500 ppm
Slovakia	NPHV (Hraničná) (mg/m³)	1920 mg/m³
Slovenia	OEL TWA (mg/m³)	1900 mg/m³
Slovenia	OEL TWA (ppm)	1000 ppm
Slovenia	OEL STEL (mg/m³)	7600 mg/m³
Slovenia	OEL STEL (ppm)	4000 ppm
Spain	VLA-EC (mg/m³)	1910 mg/m³
Spain	VLA-EC (ppm)	1000 ppm
Sweden	nivågränsvärde (NVG) (mg/m³)	1000 mg/m³
Sweden	nivågränsvärde (NVG) (ppm)	500 ppm
Sweden	kortidsvärde (KTV) (mg/m³)	1900 mg/m³
Sweden	kortidsvärde (KTV) (ppm)	1000 ppm
United Kingdom	WEL TWA (mg/m³)	1920 mg/m³
United Kingdom	WEL TWA (ppm)	1000 ppm
United Kingdom	WEL STEL (mg/m³)	5760 mg/m³ (calculated)
United Kingdom	WEL STEL (ppm)	3000 ppm (calculated)
Norway	Grenseverdier (AN) (mg/m³)	950 mg/m³
Norway	Grenseverdier (AN) (ppm)	500 ppm
Norway	Grenseverdier (Korttidsverdi) (mg/m3)	950 mg/m³
Norway	Grenseverdier (Korttidsverdi) (ppm)	500 ppm
Switzerland	VME (mg/m³)	960 mg/m³
Switzerland	VME (ppm)	500 ppm
Switzerland	VLE (mg/m³)	1920 mg/m³
Switzerland	VLE (ppm)	1000 ppm
Australia	TWA (mg/m³)	1880 mg/m³
Australia	TWA (ppm)	1000 ppm
Canada (Quebec)	VEMP (mg/m³)	1880 mg/m³
Canada (Quebec)	VEMP (ppm)	1000 ppm
USA - ACGIH	ACGIH STEL (ppm)	1000 ppm
USA - IDLH	US IDLH (ppm)	3300 ppm (10% LEL)
USA - NIOSH	NIOSH REL (TWA) (mg/m³)	1900 mg/m³
USA - NIOSH	NIOSH REL (TWA) (ppm)	1000 ppm
USA - OSHA	OSHA PEL (TWA) (mg/m³)	1900 mg/m³
USA - OSHA	OSHA PEL (TWA) (ppm)	1000 ppm

8.2. Exposure controls

Engineering control measures	:	Provide adequate ventilation. Use only in area provided with appropriate exhaust ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Take precautionary measures against static discharges. Use only non-sparking tools. Use only explosion-proof equipment. See also section 7. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Organisational measures to prevent /limit releases, dispersion and exposure.
Personal protection equipment	:	The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Hand protection	:	Wear chemically resistant gloves (tested to EN374) . NBR (Nitrile rubber). Breakthrough time (maximum wearing time) > 480m. Thickness of the glove material: 0,5mm. Butyl caoutchouc (butyl rubber). Breakthrough time (maximum wearing time) > 480m. Thickness of the glove material: 0,5mm. The selection of specific gloves for a specific application and time of use in a working area, should also take into account other factors on the working space, such as (but not limited to): other chemicals that are possibly used, physical requirements (protection against cutting/drilling, skill, thermal protection), and the instructions/specification of the supplier of gloves
Eye protection	:	tightly fitting safety goggles (EN 166)
Body protection	:	Overalls, apron and boots recommended
Respiratory protection	:	In case of insufficient ventilation, wear suitable respiratory equipment. Wear a full face respirator conforming to EN136 with Type A filter or better. (EN 141). Wear a respirator conforming to EN140 with Type A filter or better. High concentrations can remove oxygen and cause dizziness or suffocation. Container device with compressed air (DIN EN 137)
Thermal hazard protection	:	Not required for normal conditions of use. Use dedicated equipment.
Environmental exposure controls	:	Avoid release to the environment. Comply with applicable Community environmental protection legislation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	liquid
Appearance	:	liquid.
Colour	:	Blue.
Odour	:	Alcohol.
Odour threshold	:	No data available
pH	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point/freezing point	:	No data available
Freezing point	:	No data available
Initial boiling point and boiling range	:	ca 78 °C
Flash point	:	23 °C (DIN EN ISO 13736)
Auto-ignition temperature	:	ca 425 °C
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	Not applicable,liquid
Vapour pressure	:	ca 57,3 hPa (20°C)
Vapour density	:	> 1
Relative density	:	ca 0,79
Solubility	:	No data available. Water: No data available

Partition coefficient n-octanol/water	:	No data available
Kinematic viscosity	:	No data available
Dynamic viscosity	:	No data available
Explosive properties	:	Not applicable. The study does not need to be conducted because there are no chemical groups associated with explosive properties present in the molecule.
Oxidising properties	:	Not applicable. The classification procedure needs not to be applied because there are no chemical groups present in the molecule which are associated with oxidising properties.
Explosive limits	:	No data available

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapour. Reference to other sections: 10.5.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Vapours can form explosive mixtures with air. Reference to other sections: 10.4.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. See also section 7.

10.5. Incompatible materials

Incompatible with strong acids and oxidizing agents. See also section 7.

10.6. Hazardous decomposition products

Burning produces noxious and toxic fumes. Carbon oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified (Based on available data, the classification criteria are not met)

Ethylene glycol (107-21-1)	
LD50/oral/rat	4700 mg/kg
LD50 oral	4000 mg/kg
LD50/dermal/rat	10600 mg/kg

Propan-2-ol (67-63-0)	
LD50/oral/rat	5338 mg/kg
LD50/dermal/rabbit	12870 mg/kg
LC50/inhalation/4h/rat	72600 mg/m³ (Exposure time: 4 h)

Ethanol (64-17-5)	
LD50/oral/rat	7060 mg/kg
LD50/dermal/rabbit	> 15800 mg/kg
LC50/inhalation/4h/rat	124,7 mg/l
LD50, oral, Rat	10470 mg/kg
LC50, Inhalation, Rat	51 mg/l (4 hours)

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: No data available

Serious eye damage/eye irritation : Causes serious eye irritation.
pH: No data available

Respiratory or skin sensitisation	:	Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	:	Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	:	Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	:	Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	:	Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	:	Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	:	Not classified (Based on available data, the classification criteria are not met)
Other information	:	Symptoms related to the physical, chemical and toxicological characteristics. Reference to other sections: 4.2.

SECTION 12: Ecological information

12.1. Toxicity

Environmental properties : not hazardous.

Ethylene glycol (107-21-1)	
LC50 fish 1	41000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia 1	46300 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	14 - 18 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])

Propan-2-ol (67-63-0)	
LC50 fish 1	9640 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	13299 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 other aquatic organisms 1	> 1000 mg/l
LC50 fish 2	11130 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
ErC50 (algae)	> 1000 mg/l Scenedesmus subspicatus

Ethanol (64-17-5)	
LC50 fish 1	12,0 - 16,0 ml/l (Oncorhynchus mykiss [static])
EC50 Daphnia 1	9268 - 14221 mg/l (Daphnia magna)
LC50 fish 2	> 100 mg/l (Pimephales promelas [static])
EC50 Daphnia 2	2 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])

12.2. Persistence and degradability

BioClean HP65	
Persistence and degradability	Readily biodegradable.

Ethylene glycol (107-21-1)	
Persistence and degradability	Readily biodegradable.

Propan-2-ol (67-63-0)	
Persistence and degradability	Readily biodegradable.

Ethanol (64-17-5)	
Persistence and degradability	Readily biodegradable.

12.3. Bioaccumulative potential

BioClean HP65	
Partition coefficient n-octanol/water	No data available

Ethylene glycol (107-21-1)	
Partition coefficient n-octanol/water	-1,93
Bioaccumulative potential	Does not bioaccumulate.

Propan-2-ol (67-63-0)	
Partition coefficient n-octanol/water	0,05 (at 25 °C)
Log Kow	0,05

Ethanol (64-17-5)	
Partition coefficient n-octanol/water	-0,32

12.4. Mobility in soil

BioClean HP65	
Ecology - soil	No data available.

12.5. Results of PBT and vPvB assessment

ingredient	
Propan-2-ol (67-63-0)	The product does not meet the PBT and vPvB classification criteria
Ethanol (64-17-5)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

Additional information : Do not allow to enter into surface water or drains

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Handle with care. Reference to other sections: 7. Handling and storage. Dispose of contaminated materials in accordance with current regulations. Refer to manufacturer/supplier for information on recovery/recycling. Collect and dispose of waste product at an authorised disposal facility.

Additional information : Delivery to an approved waste disposal company.

Further ecological information : Do not allow to enter into surface water or drains.

List of proposed waste codes/waste designations in accordance with EWC (2001/573/EC, 75/442/EEC, 91/689/EEC) : Classified as hazardous waste according to European Union regulations
The following Waste Codes are only suggestions:
07 01 04* - other organic solvents, washing liquids and mother liquors
Waste codes should be assigned by the user based on the application for which the product was used

SECTION 14: Transport information

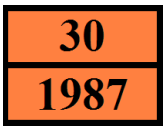
In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
1987	1987	1987	1987	1987
14.2. UN proper shipping name				
ALCOHOLS, N.O.S. (Ethanol ; Propan-2-ol)	ALCOHOLS, N.O.S. (Ethanol ; Propan-2-ol)	Alcohols, n.o.s. (Ethanol ; Propan-2-ol)	ALCOHOLS, N.O.S. (Ethanol ; Propan-2-ol)	ALCOHOLS, N.O.S. (Ethanol ; Propan-2-ol)
Transport document description				
UN 1987 ALCOHOLS, N.O.S. (Ethanol ; Propan-2-ol), 3, III, (D/E)	UN 1987 ALCOHOLS, N.O.S. (Ethanol ; Propan-2-ol), 3, III	UN 1987 Alcohols, n.o.s. (Ethanol ; Propan-2-ol), 3, III	UN 1987 ALCOHOLS, N.O.S. (Ethanol ; Propan-2-ol), 3, III	UN 1987 ALCOHOLS, N.O.S. (Ethanol ; Propan-2-ol), 3, III
14.3. Transport hazard class(es)				
3	3	3	3	3
				
14.4. Packing group				
III	III	III	III	III

ADR	IMDG	IATA	ADN	RID
14.5. Environmental hazards				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

14.6. Special precautions for user

- Overland transport

Classification code (ADR)	:	F1
Special Provisions	:	274, 601
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	:	D/E
EAC code	:	•3YE

- Transport by sea

Special provisions (IMDG)	:	223, 274
Limited quantities (IMDG)	:	5 L
Limited quantities (IMDG)	:	1 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-D
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, A180
ERG code (IATA) : 3L

- Inland waterway transport

Classification code (ADN) : F1
Special provisions (ADN) : 274, 601
Limited quantities (ADN) : 5 L
Excepted quantities (ADN) : E1
Carriage permitted (ADN) : T
Equipment required (ADN) : PP, EX, A
Ventilation (ADN) : VE01
Number of blue cones/lights (ADN) : 0

- Rail transport

Classification code (RID) : F1
Special provisions (RID) : 274, 601
Limited quantities (RID) : 5L
Excepted quantities (RID) : E1
Packing instructions (RID) : P001, IBC03, LP01, R001
Mixed packing provisions (RID) : MP19
Portable tank and bulk container instructions (RID) : T4
Portable tank and bulk container special provisions (RID) : TP1, TP29
Tank codes for RID tanks (RID) : LGBF
Transport category (RID) : 3
Special provisions for carriage – Packages (RID) : W12
Colis express (express parcels) (RID) : CE4
Hazard identification number (RID) : 30

14.7. Transport in bulk according to Annex II of MARPOL 73/78 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

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

3.b. Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10	Ethylene glycol

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National regulations

Listed on IARC (International Agency for Research on Cancer)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Substances List)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on the Canadian IDL (Ingredient Disclosure List)

Germany

VwVwS Annex reference	:	Water hazard class (WGK) 1, low hazard to waters (Classification according to VwVwS, Annex 4)
Risk classification according to VbF	:	A II - Liquids with a flashpoint between 21°C and 55°C
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV	:	Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)
TA Luft	:	Organic Substances

Netherlands

SZW-lijst van kankerverwekkende stoffen	:	Ethanol is listed
SZW-lijst van mutagene stoffen	:	None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding	:	Ethanol is listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid	:	Ethanol is listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling	:	Ethanol is listed

Denmark

Class for fire hazard	:	Class II-1
Store unit	:	5 liter
Classification remarks	:	R10 <H226;H319>; Emergency management guidelines for the storage of flammable liquids must be followed

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

For the following substances of this mixture a chemical safety assessment has been carried out
Propan-2-ol Ethanol

SECTION 16: Other information

Abbreviations and acronyms:

	ABM = Algemene beoordelingsmethodiek

	ADN = Accord Européen relatif au Transport International des Marchandises Dangereuses par voie de Navigation du Rhin ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route CLP = Classification, Labelling and Packaging Regulation according to 1272/2008/EC IATA = International Air Transport Association IMDG = International Maritime Dangerous Goods Code LEL = Lower Explosive Limit/Lower Explosion Limit UEL = Upper Explosion Limit/Upper Explosive Limit REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
	CSR = Chemical Safety Report
	DNEL = Derived No Effect Level
	LD50 = Median lethal dose
	NA = Not applicable
	N.O.S. = Not Otherwise Specified
	PNEC = Predicted No Effect Concentration
	STEL = Short term exposure limit
	TLV = Threshold limits
	TWA = time weighted average

Sources of key data used to compile the datasheet : http://esis.jrc.ec.europa.eu CSR ethanol.

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity Category 4
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
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.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

The contents and format of this SDS are in accordance with EEC Commission Directive 2015/830/EC, 1272/2008/EC and EEC Commission Regulation 1907/2006/EC (REACH) Annex II.

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