



# Eurol De-Icer

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878  
Issue date: 17.02.2014 Revision date: 14.07.2023 Supersedes: 01.11.2022 Version: 5.0

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

#### 1.1. Product identifier

Product form : Mixture  
Product name : Eurol De-Icer  
UFI : UY6W-22HR-7A0W-KFXJ  
Product code : E502520  
Product group : Trade product

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

##### 1.2.1. Relevant identified uses

Intended for general public  
Main use category : Industrial use, professional use, Consumer use  
Use of the substance/mixture : Screenwash anti-freeze.

##### 1.2.2. Uses advised against

No additional information available

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

Eurol B.V.  
Energiestraat 12  
NL-7442 DA Nijverdal  
The Netherlands  
Tel: +31 548 615 165  
[reach@eurol.com](mailto:reach@eurol.com) - [www.eurol.com](http://www.eurol.com)

#### 1.4. Emergency telephone number

Emergency number : For Transport Emergency Call +31 6 26 71 27 43 (24hr/day 7days/week)

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
Malta	Medicines & Poisons Info Office	Mater Dei Hospital Msida MSD 2090 Msida	+356 2545 6508	
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH	0344 892 0111	Only for healthcare professionals
United Kingdom	NHS 111/NHS 24/NHS Direct		111 0845 4647	or call a doctor

### 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

Serious eye damage/eye irritation, Category 2 H319

Full text of H- and EUH-statements: see section 16

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### Adverse physicochemical, human health and environmental effects

Flammable liquid and vapour. Causes serious eye irritation.

## 2.2. Label elements

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

Hazard pictograms (CLP)



GHS02

GHS07

CLP Signal word

: Warning

Hazard statements (CLP)

: H226 - Flammable liquid and vapour.

H319 - Causes serious eye irritation.

Precautionary statements (CLP)

: P102 - Keep out of reach of children.

P210 - Keep away from heat, hot surfaces, open flames, sparks. No smoking.

P280 - Wear eye protection, protective gloves.

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.

P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Child-resistant fastening

: Not applicable

Tactile warning

: Not applicable

## 2.3. Other hazards

Other hazards not contributing to the classification : Material can accumulate some static charge during transfer. Flammable or explosive vapour/air mixtures may be formed.

Contains no PBT/vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

## 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]
ethanol; ethyl alcohol substance with national workplace exposure limit(s) (GB, IE)	CAS-No.: 64-17-5 EC-No.: 200-578-6 EC Index-No.: 603-002-00-5 REACH-no: 01-2119457610-43	$\geq 50$	Flam. Liq. 2, H225 Eye Irrit. 2, H319
ethanediol; ethylene glycol substance with national workplace exposure limit(s) (GB, IE, MT); substance with a Community workplace exposure limit	CAS-No.: 107-21-1 EC-No.: 203-473-3 EC Index-No.: 603-027-00-1 REACH-no: 01-2119456816-28	5 – 10	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) STOT RE 2, H373

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
butanone; ethyl methyl ketone substance with national workplace exposure limit(s) (GB, IE, MT); substance with a Community workplace exposure limit	CAS-No.: 78-93-3 EC-No.: 201-159-0 EC Index-No.: 606-002-00-3 REACH-no: 011-2119457290- 43	0,1 – 1	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
propan-2-ol; isopropyl alcohol; isopropanol substance with national workplace exposure limit(s) (GB, IE)	CAS-No.: 67-63-0 EC-No.: 200-661-7 EC Index-No.: 603-117-00-0 REACH-no: 01-2119457558- 25	0,1 – 1	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336

### Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
ethanol; ethyl alcohol	CAS-No.: 64-17-5 EC-No.: 200-578-6 EC Index-No.: 603-002-00-5 REACH-no: 01-2119457610- 43	(50 ≤ C < 100) Eye Irrit. 2, H319

Full text of H- and EUH-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Seek medical attention if ill effect develops.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing.
First-aid measures 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.
First-aid measures after ingestion	: 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	: High concentration of vapours may induce: headache, dizziness, drowsiness, nausea and vomiting.
Symptoms/effects after skin contact	: Unlikely to cause harm to the skin on brief or occasional contact but prolonged or repeated exposure may lead to dermatitis.
Symptoms/effects after eye contact	: Eye irritation.
Symptoms/effects after ingestion	: Bad taste. Vomiting after ingestion may cause aspiration into the lungs, which may cause severe lungdamage or death.
Symptoms/effects upon intravenous administration	: No information available.

### 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.
Unsuitable extinguishing media	: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

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

Fire hazard	: Flammable liquid and vapour.
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- Explosion hazard : May form flammable/explosive vapour-air mixture.  
Hazardous decomposition products in case of fire : CO, CO<sub>2</sub>.

### 5.3. Advice for firefighters

- Precautionary measures fire : Do not enter fire area without proper protective equipment, including respiratory protection.  
Firefighting instructions : Use water spray or fog for cooling exposed containers.  
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.  
Other information : Prevent fire fighting water from entering the environment. Sweep up and remove to a suitable, clearly marked container for disposal in accordance with local regulations. Heavier than air, vapours may travel long distances along ground, ignite and flash back to source.

## SECTION 6: Accidental release measures

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

- General measures : Prevent soil and water pollution. Spill area may be slippery. Prevent build-up of electrostatic charges (e.g. by grounding). Remove all sources of ignition.

#### 6.1.1. For non-emergency personnel

- Protective equipment : When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.  
Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. 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".  
Emergency procedures : No specific measures are necessary.

### 6.2. Environmental precautions

Avoid release to the environment.

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

- For containment : Contain large spillage with sand or earth.  
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

- Additional hazards when processed : In use, may form flammable vapour-air mixture. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.  
Precautions for safe handling : Ensure good ventilation of the work station. 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. Avoid contact with skin and eyes.  
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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### 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.
Incompatible products	: Reacts vigorously with strong oxidizers and acids.
Maximum storage period	: 5 year
Storage temperature	: ≤ 40 °C
Information on mixed storage	: Keep away from : Oxidizing materials. Strong acids.
Storage area	: Store at ambient temperature.
Special rules on packaging	: Keep container tightly closed and dry.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1 National occupational exposure and biological limit values

ethanol; ethyl alcohol (64-17-5)	
<b>Ireland - Occupational Exposure Limits</b>	
Local name	Ethanol [Ethyl alcohol]
OEL (15 min ref) (ppm)	1000 ppm
Regulatory reference	Chemical Agents Code of Practice 2021
<b>United Kingdom - Occupational Exposure Limits</b>	
Local name	Ethanol
WEL TWA (mg/m <sup>3</sup> )	1920 mg/m <sup>3</sup>
WEL TWA (ppm)	1000 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
ethanediol; ethylene glycol (107-21-1)	
<b>EU - Indicative Occupational Exposure Limit (IOEL)</b>	
Local name	Ethylene glycol
IOELV TWA (mg/m <sup>3</sup> )	52 mg/m <sup>3</sup>
IOELV TWA (ppm)	20 ppm
IOELV STEL (mg/m <sup>3</sup> )	104 mg/m <sup>3</sup>
IOELV STEL (ppm)	40 ppm
Notes	Skin
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
<b>Ireland - Occupational Exposure Limits</b>	
Local name	Ethane-1,2-diol [Ethylene glycol]
OEL (8 hours ref) (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> particulate 52 mg/m <sup>3</sup> vapour
OEL (8 hours ref) (ppm)	20 ppm vapour
OEL (15 min ref) (mg/m <sup>3</sup> )	104 mg/m <sup>3</sup> vapour
OEL (15 min ref) (ppm)	40 ppm vapour

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<b>ethanediol; ethylene glycol (107-21-1)</b>	
Remark	Sk (Substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the body), IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2021
<b>Malta - Occupational Exposure Limits</b>	
Local name	Ethylene glycol
OEL TWA (mg/m <sup>3</sup> )	52 mg/m <sup>3</sup>
OEL TWA (ppm)	20 ppm
OEL STEL (mg/m <sup>3</sup> )	104 mg/m <sup>3</sup>
OEL STEL (ppm)	40 ppm
Remark	Skin # Ġilda
Regulatory reference	S.L.424.24 - Chemical Agents at Work Regulations (L.N.356 of 2021)
<b>United Kingdom - Occupational Exposure Limits</b>	
Local name	Ethane-1,2-diol
WEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> particulate 52 mg/m <sup>3</sup> vapour
WEL TWA (ppm)	20 ppm vapour
WEL STEL (mg/m <sup>3</sup> )	104 mg/m <sup>3</sup> vapour
WEL STEL (OEL STEL) [ppm]	40 ppm vapour
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)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
<b>butanone; ethyl methyl ketone (78-93-3)</b>	
<b>EU - Indicative Occupational Exposure Limit (IOEL)</b>	
Local name	Butanone
IOELV TWA (mg/m <sup>3</sup> )	600 mg/m <sup>3</sup>
IOELV TWA (ppm)	200 ppm
IOELV STEL (mg/m <sup>3</sup> )	900 mg/m <sup>3</sup>
IOELV STEL (ppm)	300 ppm
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
<b>Ireland - Occupational Exposure Limits</b>	
Local name	Methyl ethyl ketone (MEK)
OEL (8 hours ref) (mg/m <sup>3</sup> )	600 mg/m <sup>3</sup>
OEL (8 hours ref) (ppm)	200 ppm
OEL (15 min ref) (mg/m <sup>3</sup> )	900 mg/m <sup>3</sup>
OEL (15 min ref) (ppm)	300 ppm
Remark	Sk (Substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the body), IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2021

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<b>butanone; ethyl methyl ketone (78-93-3)</b>	
<b>Ireland - Biological limit values</b>	
Local name	Butan-2-one
BMGV	70 µmol/l Parameter: butan-2- one - Medium: urine - Sampling time: Post shift
Regulatory reference	Biological Monitoring Guidelines (HSA, 2011)
<b>Malta - Occupational Exposure Limits</b>	
Local name	Butanone
OEL TWA (mg/m <sup>3</sup> )	600 mg/m <sup>3</sup>
OEL TWA (ppm)	200 ppm
OEL STEL (mg/m <sup>3</sup> )	900 mg/m <sup>3</sup>
OEL STEL (ppm)	300 ppm
Regulatory reference	S.L.424.24 - Chemical Agents at Work Regulations (L.N.356 of 2021)
<b>United Kingdom - Occupational Exposure Limits</b>	
Local name	Butan-2-one (methyl ethyl ketone)
WEL TWA (mg/m <sup>3</sup> )	600 mg/m <sup>3</sup>
WEL TWA (ppm)	200 ppm
WEL STEL (mg/m <sup>3</sup> )	899 mg/m <sup>3</sup>
WEL STEL (OEL STEL) [ppm]	300 ppm
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)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
<b>United Kingdom - Biological limit values</b>	
Local name	Butan-2-one (methyl ethyl ketone)
BMGV	70 µmol/l Parameter: butan-2-one - Medium: urine - Sampling time: Post shift
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
<b>propan-2-ol; isopropyl alcohol; isopropanol (67-63-0)</b>	
<b>Ireland - Occupational Exposure Limits</b>	
Local name	Isopropyl alcohol [Propan-2-ol]
OEL (8 hours ref) (ppm)	200 ppm
OEL (15 min ref) (ppm)	400 ppm
Remark	Sk (Substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the body)
Regulatory reference	Chemical Agents Code of Practice 2021
<b>Ireland - Biological limit values</b>	
Local name	2-Propanol
BMGV	40 mg/l Parameter: acetone - Medium: urine - Sampling time: End of shift at end of workweek - Notations: B (Background), Ns (Non-specific)
Regulatory reference	Biological Monitoring Guidelines (HSA, 2011)
<b>United Kingdom - Occupational Exposure Limits</b>	
Local name	Propan-2-ol
WEL TWA (mg/m <sup>3</sup> )	999 mg/m <sup>3</sup>

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propan-2-ol; isopropyl alcohol; isopropanol (67-63-0)	
WEL TWA (ppm)	400 ppm
WEL STEL (mg/m <sup>3</sup> )	1250 mg/m <sup>3</sup>
WEL STEL (OEL STEL) [ppm]	500 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

### 8.1.2. Recommended monitoring procedures

No additional information available

### 8.1.3. Air contaminants formed

No additional information available

### 8.1.4. DNEL and PNEC

No additional information available

### 8.1.5. Control banding

No additional information available

## 8.2. Exposure controls

### 8.2.1. Appropriate engineering controls

#### Appropriate engineering controls:

Ensure good ventilation of the work station.

### 8.2.2. Personal protection equipment

#### Personal protective equipment:

Gloves. In case of splash hazard: safety glasses. Respiratory protective equipment is not normally required where there is adequate natural or local exhaust ventilation to control exposure.

#### Personal protective equipment symbol(s):



#### 8.2.2.1. Eye and face protection

##### Eye protection:

Safety glasses

#### 8.2.2.2. Skin protection

##### Skin and body protection:

Wear suitable protective clothing

##### Hand protection:

Protective gloves

##### Other skin protection

##### Materials for protective clothing:

Neoprene or nitrile rubber gloves. PVC gloves. Chemical resistant gloves (according to European standard NF ISO 374-1 or equivalent)

#### 8.2.2.3. Respiratory protection

##### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment.

#### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

#### Environmental exposure controls:

Avoid release to the environment.



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### Consumer exposure controls:

Provide good ventilation in process area to prevent formation of vapour. Neoprene or nitrile rubber gloves. PVC gloves.

### Other information:

Do not put the product-soaked rags into the pockets of working clothes. Do not use cloths stained with the product to dry hands. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke during use. Wash contaminated clothing before reuse.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Blue.
Appearance	: Liquid.
Odour	: characteristic. lemon odour.
Odour threshold	: Not available
Melting point	: $\leq -45$ °C ASTM D 97
Freezing point	: Not available
Boiling point	: $> 78$ °C
Flammability (solid, gas)	: Flammable liquid and vapour
Lower explosive limit (LEL)	: 3,5 vol %
Upper explosive limit (UEL)	: 15 vol %
Flash point	: $> 23$ °C ASTM D 93
Auto-ignition temperature	: $> 200$ °C
Decomposition temperature	: Not available
pH	: 7
Viscosity, kinematic	: 1 mm <sup>2</sup> /s
Solubility	: Soluble in water.
Log Kow	: Not available
Log Pow	: $< 0,1$
Vapour Pressure 20°C	: $< 23$ hPa
Vapour pressure at 50°C	: Not available
Density	: 0,905 – 0,92 kg/l ASTM D 4052
Relative density	: Not available
Relative vapour density at 20°C	: $> 1$ (air = 1)
Particle characteristics	: Not applicable

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

Explosion limits : 3,5 – 15 vol %

#### 9.2.2. Other safety characteristics

Relative evaporation rate (butylacetate=1) :  $< 0,1$   
VOC content : 50 – 60 %

## 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

Refer to section 10.1 on Reactivity.

### 10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

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### 10.5. Incompatible materials

Strong oxidizing agents. Strong acids.

### 10.6. Hazardous decomposition products

CO, CO<sub>2</sub>.

## SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not classified  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Not classified

#### ethanol; ethyl alcohol (64-17-5)

LD50 oral rat	10470 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 9720 - 11380
LD50 dermal rabbit	> 15800 mg/kg
LC50 Inhalation - Rat	51 mg/l/4h
LC50 Inhalation - Rat (Dust/Mist)	124,7 mg/l/4h

#### ethanediol; ethylene glycol (107-21-1)

LD50 oral rat	7712 mg/kg bodyweight Animal: rat
LD50 dermal	> 3500 mg/kg mouse
LC50 Inhalation - Rat	> 2,5 mg/l (6h)

#### butanone; ethyl methyl ketone (78-93-3)

LD50 oral rat	2737 mg/kg
LD50 dermal rabbit	6480 mg/kg
LC50 Inhalation - Rat	34 mg/l/4h

#### propan-2-ol; isopropyl alcohol; isopropanol (67-63-0)

LD50 oral rat	5840 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	> 2000 mg/kg
LC50 Inhalation - Rat	> 20 mg/l

Skin corrosion/irritation : Not classified  
pH: 7

#### ethanediol; ethylene glycol (107-21-1)

pH	6 – 7,5
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Serious eye damage/irritation : Causes serious eye irritation.  
pH: 7

#### ethanediol; ethylene glycol (107-21-1)

pH	6 – 7,5
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Respiratory or skin sensitisation : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified  
Reproductive toxicity : Not classified  
STOT-single exposure : Not classified

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<b>butanone; ethyl methyl ketone (78-93-3)</b>	
STOT-single exposure	May cause drowsiness or dizziness.
<b>propan-2-ol; isopropyl alcohol; isopropanol (67-63-0)</b>	
STOT-single exposure	May cause drowsiness or dizziness.
STOT-repeated exposure	: Not classified
<b>ethanol; ethyl alcohol (64-17-5)</b>	
LOAEL (oral, rat, 90 days)	3200 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (oral, rat, 90 days)	1730 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents), Remarks on results: other:
<b>ethanediol; ethylene glycol (107-21-1)</b>	
STOT-repeated exposure	May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).
<b>butanone; ethyl methyl ketone (78-93-3)</b>	
NOAEC (inhalation, rat, gas, 90 days)	2500 ppmv/6h/day
Aspiration hazard	: Not classified
Additional information	: May be fatal if swallowed and enters airways
<b>Eurol De-Icer</b>	
Viscosity, kinematic	1 mm <sup>2</sup> /s
<b>ethanol; ethyl alcohol (64-17-5)</b>	
Viscosity, kinematic	1 mm <sup>2</sup> /s
<b>propan-2-ol; isopropyl alcohol; isopropanol (67-63-0)</b>	
Viscosity, kinematic	2,5 mm <sup>2</sup> /s
<b>11.2. Information on other hazards</b>	
No additional information available	
<b>SECTION 12: Ecological information</b>	
<b>12.1. Toxicity</b>	
Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified
<b>ethanol; ethyl alcohol (64-17-5)</b>	
LC50 fish 1	12 – 16 mg/l (Oncorhynchus mykiss [static])
LC50 fish 2	> 100 mg/l (Pimephales promelas [static])
EC50 Daphnia 1	> 10000 mg/l Test organisms (species): Daphnia magna
EC50 Daphnia 2	10800 mg/l (24 h; Daphnia magna)
EC50 96h - Algae [1]	≈ 22000 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
Threshold limit algae 1	1450 mg/l (192 h; Microcystis aeruginosa)
Threshold limit algae 2	5000 mg/l (168 h; Scenedesmus quadricauda)

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<b>ethanediol; ethylene glycol (107-21-1)</b>	
LC50 fish 1	> 72860 mg/l Test organisms (species): Pimephales promelas
EC50 Daphnia 1	> 100 mg/l Test organisms (species): Daphnia magna
NOEC (chronic)	≥ 1000 mg/l Test organisms (species): Americamysis bahia (previous name: Mysidopsis bahia) Duration: '23 d'
NOEC chronic fish	15380 mg/l Pimephales promelas
NOEC chronic crustacea	8590 mg/l daphnia
<b>butanone; ethyl methyl ketone (78-93-3)</b>	
LC50 fish 1	2973 mg/l Test organisms (species): Pimephales promelas
EC50 Daphnia 1	308 mg/l Test organisms (species): Daphnia magna
EC50 Daphnia 2	5091 mg/l (48 h ; Daphnia magna)
EC50 72h - Algae [1]	1220 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	1240 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
<b>propan-2-ol; isopropyl alcohol; isopropanol (67-63-0)</b>	
LC50 fish 1	9640 mg/l (96h; Pimephales promelas [flow-trough])
LC50 fish 2	11130 mg/l (96h; Pimephales promelas [static])
EC50 Daphnia 1	13299 mg/l (48h; Daphnia magna)
EC50 other aquatic organisms 1	> 1000 mg/l (96h; Desmodesmus subspicatus)
EC50 other aquatic organisms 2	> 1000 mg/l (72h; Desmodesmus subspicatus)
EC50 72h - Algae [1]	> 100 mg/l Scenedesmus subspicatus
EC50 96h - Algae [1]	> 1000 mg/l Desmodesmus subspicatus
<b>12.2. Persistence and degradability</b>	
<b>Eurol De-Icer</b>	
Persistence and degradability	Readily biodegradable in water. The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.
<b>ethanol; ethyl alcohol (64-17-5)</b>	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. No (test)data on mobility of the substance available.
<b>ethanediol; ethylene glycol (107-21-1)</b>	
Persistence and degradability	Readily biodegradable in water. easily degradable in the soil.
Biochemical oxygen demand (BOD)	0,47 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1,24 g O <sub>2</sub> /g substance
ThOD	1,29 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0,36
<b>butanone; ethyl methyl ketone (78-93-3)</b>	
Biodegradation	98 % 28 d

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### propan-2-ol; isopropyl alcohol; isopropanol (67-63-0)

Biodegradation	95 % (21 d; OECD 301E)
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### 12.3. Bioaccumulative potential

#### Eurol De-Icer

Log Pow	< 0,1
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Bioaccumulative potential	This product is not expected to bioaccumulate through food chains in the environment.
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### ethanol; ethyl alcohol (64-17-5)

Log Pow	-0,31
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### ethanediol; ethylene glycol (107-21-1)

Log Pow	-1,36
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Bioaccumulative potential	No bioaccumulation.
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### butanone; ethyl methyl ketone (78-93-3)

Log Kow	0,3
---------	-----

### propan-2-ol; isopropyl alcohol; isopropanol (67-63-0)

Bioconcentration factor (BCF REACH)	< 100
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Log Pow	< 3 Slightly bioaccumulative
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### 12.4. Mobility in soil

#### Eurol De-Icer

Ecology - soil	Spillages may penetrate the soil causing ground water contamination.
----------------	--

### ethanol; ethyl alcohol (64-17-5)

Ecology - soil	Spillages may penetrate the soil causing ground water contamination. Completely miscible with water.
----------------	--

### ethanediol; ethylene glycol (107-21-1)

Surface tension	0,048 N/m (20 °C)
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### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Endocrine disrupting properties

No additional information available

### 12.7. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Regional legislation (waste)	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Do not discharge into drains or the environment.
Additional information	: Flammable vapours may accumulate in the container.
Ecology - waste materials	: When not empty dispose of this container at hazardous or special waste collection point.

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European List of Waste (LoW) code : 07 06 04\* - other organic solvents, washing liquids and mother liquors

### SECTION 14: Transport information

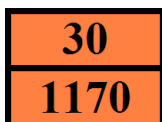
In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
UN 1170	UN 1170	UN 1170	UN 1170	UN 1170
<b>14.2. UN proper shipping name</b>				
ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)	Ethanol solution	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
<b>Transport document description</b>				
UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, III, (D/E)	UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, III	UN 1170 Ethanol solution, 3, III	UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, III	UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, III
<b>14.3. Transport hazard class(es)</b>				
3	3	3	3	3
				
<b>14.4. Packing group</b>				
III	III	III	III	III
<b>14.5. Environmental hazards</b>				
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 (UN) : F1  
Special provisions (ADR) : 144, 601  
Limited quantities (ADR 2011) : 5I  
Excepted quantities (ADR) : E1  
Packing instructions (ADR) : P001, IBC03, LP01, R001  
Mixed packing provisions (ADR) : MP19  
Portable tank and bulk container instructions (ADR) : T2  
Portable tank and bulk container special provisions (ADR) : TP1  
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 :



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Tunnel restriction code (ADR) : D/E  
EAC code : •2YE

### Transport by sea

Special provisions (IMDG) : 144, 223  
Limited quantities (IMDG) : 5 L  
Excepted quantities (IMDG) : E1  
Packing instructions (IMDG) : P001, LP01  
IBC packing instructions (IMDG) : IBC03  
Tank instructions (IMDG) : T2  
Tank special provisions (IMDG) : TP1  
EmS-No. (Fire) : F-E  
EmS-No. (Spillage) : S-D  
Stowage category (IMDG) : A  
Flash point (IMDG) : 23°C  
Properties and observations (IMDG) : Colourless, volatile liquids. Pure ETHANOL: flashpoint 13°C c.c. Explosive limits: 3.3% to 19% Miscible with water.

### 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, A58, A180  
ERG code (IATA) : 3L

### Inland waterway transport

Classification code (ADN) : F1  
Special provisions (ADN) : 144, 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) : 144, 601  
Excepted quantities (RID) : E1  
Packing instructions (RID) : P001, IBC03, LP01, R001  
Mixed packing provisions (RID) : MP19  
Portable tank and bulk container instructions (RID) : T2  
Portable tank and bulk container special provisions (RID) : TP1  
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. Maritime transport in bulk according to IMO instruments

Not applicable

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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-Regulations

###### REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)	
Reference code	Applicable on
3(a)	EuroI De-Icer ; ethanol; ethyl alcohol ; butanone; ethyl methyl ketone ; propan-2-ol; isopropyl alcohol; isopropanol
3(b)	EuroI De-Icer ; ethanol; ethyl alcohol ; ethanediol; ethylene glycol ; butanone; ethyl methyl ketone ; propan-2-ol; isopropyl alcohol; isopropanol
40.	ethanol; ethyl alcohol ; butanone; ethyl methyl ketone ; propan-2-ol; isopropyl alcohol; isopropanol

###### REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

###### REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

###### PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

###### POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

###### Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

###### VOC Directive (2004/42)

VOC content : 50 – 60 %

###### Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

###### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

##### 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

Indication of changes			
Section	Changed item	Change	Comments
	Supersedes	Modified	
	Revision date	Modified	
	Flammability (solid, gas)	Added	
2.1	Adverse physicochemical, human health and environmental effects	Added	
4.1	First-aid measures after skin contact	Modified	
4.1	First-aid measures after inhalation	Modified	



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Indication of changes			
Section	Changed item	Change	Comments
4.1	First-aid measures after ingestion	Modified	
4.1	First-aid measures after eye contact	Modified	
4.2	Symptoms/injuries after eye contact	Modified	
5.1	Suitable extinguishing media	Modified	
5.2	Fire hazard	Modified	
5.3	Protection during firefighting	Modified	
6.1	Protective equipment	Modified	
6.1	Emergency procedures	Modified	
6.2	Environmental precautions	Modified	
6.3	Methods for cleaning up	Modified	
6.3	Other information	Modified	
7.1	Precautions for safe handling	Modified	
7.1	Hygiene measures	Modified	
7.2	Technical measures	Modified	
7.2	Storage conditions	Modified	
8.2	Environmental exposure controls	Modified	
8.2	Respiratory protection	Modified	
8.2	Hand protection	Modified	
8.2	Eye protection	Modified	
8.2	Appropriate engineering controls	Modified	
8.2	Skin and body protection	Modified	
9.1	Upper explosive limit (UEL)	Added	
9.1	Lower explosive limit (LEL)	Added	
9.1	Flash point	Modified	
9.1	Melting point	Modified	
9.1	Density	Modified	
10.1	Reactivity	Modified	
10.4	Conditions to avoid	Modified	
12.1	Ecology - general	Modified	
13.1	Product/Packaging disposal recommendations	Added	
13.1	Additional information	Modified	
15.2	Chemical safety assessment	Added	
16	Abbreviations and acronyms	Added	
16	Data sources	Added	
16	Other information	Added	

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Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

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Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
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.
H373	May cause damage to organs through prolonged or repeated exposure.
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Flam. Liq. 3	H226	On basis of test data
Eye Irrit. 2	H319	Calculation method

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.