



SAFETY DATA SHEET
750ml SUPER PROFESSIONAL DE-ICER A3
 Commission Regulation (EU) No 2015/830 of 28 May 2015.

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

1.1. Product identifier

Product name 750ml SUPER PROFESSIONAL DE-ICER A3
Product number 800-272-0013 A3
Container size 750ML

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

Identified uses De-icing fluid.

1.3. Details of the supplier of the safety data sheet

Supplier Mirius™
 A Coventry Group Company
 Woodhams Road
 Siskin Drive
 Coventry
 CV3 4FX
 Tel: +44 (0) 02476 639 739
 Fax: +44 (0) 02476 639 717
 Email: sales@mirius.com

Contact person For content of safety data sheet., sds@mirius.com

1.4. Emergency telephone number

Emergency telephone +44 (0) 1865407333 (Strictly for emergencies only: incidents involving damage to human health and/or the environment)

National emergency telephone number In case of a medical emergency following exposure to a chemical call NHS Direct in England or Wales 0845 46 47 or NHS 24 in Scotland 08454 24 24 24

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified
Health hazards STOT RE 2 - H373
Environmental hazards Not Classified

2.2. Label elements

Pictogram



Signal word Warning

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Hazard statements	H373 May cause damage to organs through prolonged or repeated exposure.
Precautionary statements	P314 Get medical advice/ attention if you feel unwell. P260 Do not breathe fume. P501 Dispose of contents/ container in accordance with local regulations.
Contains	ETHANE-1,2-DIOL
Detergent labelling	Contains 2-Bromo-2-nitropropane-1, 3-diol

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

ETHANE-1,2-DIOL		30-60%
CAS number: 107-21-1	EC number: 203-473-3	REACH registration number: 01-2119456816-28-XXXX
Classification	Classification (67/548/EEC or 1999/45/EC)	
Acute Tox. 4 - H302	Xn;R22	
STOT RE 2 - H373		
BRONOPOL (INN)		<1%
CAS number: 52-51-7	EC number: 200-143-0	REACH registration number: 01-2119980938-15-XXXX
M factor (Acute) = 10		
Classification	Classification (67/548/EEC or 1999/45/EC)	
Acute Tox. 4 - H302	Xn;R21/22 Xi;R37/38,R41 N;R50	
Acute Tox. 4 - H312		
Skin Irrit. 2 - H315		
Eye Dam. 1 - H318		
STOT SE 3 - H335		
Aquatic Acute 1 - H400		
Aquatic Chronic 2 - H411		

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Get medical attention immediately. Provide eyewash station and safety shower. Show this Safety Data Sheet to the medical personnel.
Inhalation	Remove affected person from source of contamination. Keep affected person warm and at rest. Get medical attention if symptoms are severe or persist. Show this Safety Data Sheet to the medical personnel.
Ingestion	Never give anything by mouth to an unconscious person. Do not induce vomiting. Remove person to fresh air and keep comfortable for breathing. Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention immediately.

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Skin contact	Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Continue to rinse for at least 15 minutes. Get medical attention promptly if symptoms occur after washing.
Eye contact	Remove affected person from source of contamination. Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention immediately. Continue to rinse.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

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

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure. Chemical burns must be treated by a physician. Get medical attention immediately.
Inhalation	Vapours may cause headache, fatigue, dizziness and nausea.
Ingestion	May cause nausea, headache, dizziness and intoxication. Drowsiness, dizziness, disorientation, vertigo. Danger of serious damage to health by prolonged exposure if swallowed.
Skin contact	Prolonged contact may cause redness, irritation and dry skin.
Eye contact	May cause temporary eye irritation.

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

Notes for the doctor	No specific recommendations. If in doubt, get medical attention promptly.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire. Use foam, carbon dioxide, dry powder or water fog to extinguish.
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5.2. Special hazards arising from the substance or mixture

Specific hazards	Thermal decomposition or combustion products may include the following substances: Toxic gases or vapours. Carbon monoxide (CO). Carbon dioxide (CO ₂). In case of fire and/or explosion do not breathe fumes.
Hazardous combustion products	Oxides of carbon.

5.3. Advice for firefighters

Protective actions during firefighting	Control run-off water by containing and keeping it out of sewers and watercourses.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear protective clothing as described in Section 8 of this safety data sheet.
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6.2. Environmental precautions

Environmental precautions	Avoid or minimise the creation of any environmental contamination. Collect and dispose of spillage as indicated in Section 13. Do not discharge into drains or watercourses or onto the ground.
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6.3. Methods and material for containment and cleaning up

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Methods for cleaning up Do not touch or walk into spilled material. Stop leak if safe to do so. Absorb in vermiculite, dry sand or earth and place into containers. Flush contaminated area with plenty of water. Avoid the spillage or runoff entering drains, sewers or watercourses.

6.4. Reference to other sections

Reference to other sections See Section 1 for emergency contact information. For personal protection, see Section 8. See Section 11 for additional information on health hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid spilling. Avoid contact with skin and eyes. Provide adequate ventilation. Wear protective clothing as described in Section 8 of this safety data sheet. Good personal hygiene procedures should be implemented. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. Do not eat, drink or smoke when using this product. Pregnant or breastfeeding women should not work with this product if there is any risk of exposure.

Advice on general occupational hygiene Good personal hygiene procedures should be implemented. Do not eat, drink or smoke when using this product. Wash promptly with soap and water if skin becomes contaminated. Take off immediately all contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from food and drink.

Storage class Corrosive storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

ETHANE-1,2-DIOL

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ particulate

Long-term exposure limit (8-hour TWA): WEL 20 ppm 52 mg/m³ vapour

Sk

Short-term exposure limit (15-minute): WEL 40 ppm 104 mg/m³ vapour

Sk

WEL = Workplace Exposure Limit

Sk = Can be absorbed through the skin.

ETHANE-1,2-DIOL (CAS: 107-21-1)

DNEL

Industry - Inhalation; Short term systemic effects: 35 mg/m³

Industry - Dermal; Long term : 106 mg/kg/day

Consumer - Inhalation; Long term : 7 mg/m³

General population - Dermal; Long term systemic effects: 53 mg/kg/day

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PNEC	- Fresh water; 10 mg/l
	- Marine water; 1 mg/l
	- Soil; 1.53 mg/l
	- STP; 199.5 mg/l
	- Sediment (Freshwater); 37 mg/kg
	- Sediment (Marinewater); 3.7 mg/kg
	- Intermittent release; 10 mg/l

BRNOPOL (INN) (CAS: 52-51-7)

DNEL	Workers - Inhalation; Long term systemic effects: 4.1 mg/m ³
	Workers - Inhalation; Short term systemic effects: 12.3 mg/m ³
	Workers - Inhalation; Long term local effects: 4.2 mg/m ³
	Workers - Inhalation; Short term local effects: 4.2 mg/m ³
	Workers - Dermal; Long term systemic effects: 2.3 mg/kg/day
	Workers - Dermal; Short term systemic effects: 7 mg/kg/day
	Workers - Dermal; Long term local effects: 0.013 mg/cm ²
	Workers - Dermal; Short term local effects: 0.013 mg/cm ²
	General population - Inhalation; Long term systemic effects: 1.2 mg/m ³
	General population - Inhalation; Short term systemic effects: 3.7 mg/m ³
	General population - Inhalation; Long term local effects: 1.3 mg/m ³
	General population - Inhalation; Short term local effects: 1.3 mg/m ³
	General population - Dermal; Long term systemic effects: 1.4 mg/kg/day
	General population - Dermal; Short term systemic effects: 4.2 mg/kg/day
General population - Dermal; Long term local effects: 0.008 mg/cm ²	
General population - Dermal; Short term local effects: 0.008 mg/cm ²	
General population - Oral; Long term systemic effects: 0.35 mg/kg/day	
General population - Oral; Short term systemic effects: 1.1 mg/kg/day	

PNEC	- Fresh water; 0.01 mg/l
	- Marine water; 0.008 mg/l
	- Intermittent release; 0.0025 mg/l
	- STP; 0.43 mg/l
	- Sediment (Freshwater); 0.041 mg/kg
	- Sediment (Marinewater); 0.00328 mg/kg
	- Soil; 0.5 mg/kg

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation. Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

No specific eye protection required during normal use. Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses. Personal protective equipment for eye and face protection should comply with European Standard EN166.

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Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. It is recommended that gloves are made of the following material: Nitrile rubber. Polyvinyl chloride (PVC). To protect hands from chemicals, gloves should comply with European Standard EN374. Frequent changes are recommended.
Other skin and body protection	Wear appropriate clothing to prevent repeated or prolonged skin contact. Use appropriate skin cream to prevent drying of skin.
Hygiene measures	Provide eyewash station and safety shower. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Wash promptly with soap and water if skin becomes contaminated. Use appropriate skin cream to prevent drying of skin.
Respiratory protection	No specific requirements are anticipated under normal conditions of use. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.
Environmental exposure controls	Avoid releasing into the environment. Keep container tightly sealed when not in use.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Blue.
Odour	Mild.
pH	pH (concentrated solution): 7.9
Relative density	1.039 @ @ 20°C
Solubility(ies)	Soluble in water.
Explosive under the influence of a flame	Not considered to be explosive.
Comments	Information given is applicable to the product as supplied.

9.2. Other information

Other information	None.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Under normal conditions of storage and use, no hazardous reactions will occur.
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10.2. Chemical stability

Stability	Stable at normal ambient temperatures.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	No potentially hazardous reactions known.
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10.4. Conditions to avoid

Conditions to avoid	Avoid exposure to high temperatures or direct sunlight.
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10.5. Incompatible materials

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Materials to avoid No specific material or group of materials is likely to react with the product to produce a hazardous situation.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition or combustion products may include the following substances: Carbon monoxide (CO). Carbon dioxide (CO₂).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) LD50 for Ethanediol: 4,700 mg/kg (oral, rat) (Literature). Estimated lethal dose by ingestion of Ethanediol for humans: 100ml.

General information Prolonged and repeated contact with solvents over a long period may lead to permanent health problems.

Inhalation Vapour may irritate respiratory system/lungs.

Ingestion Harmful if swallowed. Harmful: danger of serious damage to health by prolonged exposure if swallowed.

Skin contact Skin irritation should not occur when used as recommended. Repeated exposure may cause skin dryness or cracking.

Eye contact May cause temporary eye irritation.

Acute and chronic health hazards Gas or vapour is harmful on prolonged exposure or in high concentrations. Narcotic effect. Swallowing concentrated chemical may cause severe internal injury. May cause damage to the liver and kidneys.

Route of exposure Ingestion Skin and/or eye contact

Target organs Central nervous system Heart & cardiovascular system Kidneys Liver Respiratory system, lungs Brain

Medical symptoms Nausea, vomiting. Central nervous system depression. Drowsiness, dizziness, disorientation, vertigo.

Toxicological information on ingredients.

ETHANE-1,2-DIOL

Toxicological effects The toxicity of this substance has been assessed during REACH registration.

Acute toxicity - oral

Notes (oral LD₅₀) Harmful if swallowed. REACH dossier information.

ATE oral (mg/kg) 301.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 3,501.0

Species Mouse

Notes (dermal LD₅₀) REACH dossier information.

Acute toxicity - inhalation

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Acute toxicity inhalation (LC₅₀ dust/mist mg/l)	2.5
Species	Rat
Notes (inhalation LC₅₀)	REACH dossier information.
<u>Skin corrosion/irritation</u>	
Skin corrosion/irritation	Not corrosive to skin. REACH dossier information.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Not classified. REACH dossier information.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	Data lacking. REACH dossier information.
<u>Skin sensitisation</u>	
Skin sensitisation	Not sensitising. REACH dossier information.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Based on available data the classification criteria are not met. REACH dossier information.
<u>Carcinogenicity</u>	
Carcinogenicity	There is no evidence that the product can cause cancer. Based on available data the classification criteria are not met. REACH dossier information.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Based on available data the classification criteria are not met. REACH dossier information.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - repeated exposure</u>	
Summary	REACH dossier information. May cause damage to organs through prolonged or repeated exposure.
STOT - repeated exposure	NOAEL 150 mg/kg/day, Oral, Rat NOAEL 2200 mg/kg/day, Dermal,
Target organs	Kidneys

SECTION 12: Ecological Information

Ecotoxicity There are no data on the ecotoxicity of this product. Not regarded as dangerous for the environment.

12.1. Toxicity

Ecological information on ingredients.

ETHANE-1,2-DIOL

Toxicity	Not classified for environmental hazards.
<u>Acute aquatic toxicity</u>	
Acute toxicity - fish	LC ₅₀ , : 72860 mg/l, Freshwater fish

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Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: >100 mg/l, Daphnia magna

Acute toxicity - microorganisms EC₅₀, 30 minutes: 225 mg/l, Activated sludge

Chronic aquatic toxicity

Chronic toxicity - fish early life stage NOEC, : 15380 mg/l, Freshwater fish

12.2. Persistence and degradability

Persistence and degradability The product is readily biodegradable. The surfactant(s) contained in this product 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.

Ecological information on ingredients.

ETHANE-1,2-DIOL

Biodegradation Water - Degradation 90: > 10 days
REACH dossier information.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation. The product does not contain any substances expected to be bioaccumulating.

Ecological information on ingredients.

ETHANE-1,2-DIOL

Partition coefficient log Kow: - 1.36 REACH dossier information.

12.4. Mobility in soil

Mobility The product is water-soluble and may spread in water systems.

Ecological information on ingredients.

ETHANE-1,2-DIOL

Adsorption/desorption coefficient Koc 1

Henry's law constant 0.133 Pa m³/mol @ 25°F REACH dossier information.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

Ecological information on ingredients.

ETHANE-1,2-DIOL

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects Not known.

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information

Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Do not discharge into drains or watercourses or onto the ground.

Disposal methods

This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues and hence be potentially hazardous. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General

The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

Not applicable.

SECTION 15: Regulatory information

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

National regulations

The Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No. 2677) (as amended).

Control of Pollution (Special Waste) Regulations 1980 (as amended).

The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].

EH40/2005 Workplace exposure limits.

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).

The Hazardous Waste Regulations 2005.

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EU legislations

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

Commission Regulation (EU) No 453/2010 of 20 May 2010.

Commission Directive 2000/39/EC of 8 June 2000 establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work (as amended).

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 (as amended).

Commission Decision 2000/532/EC as amended by Decision 2001/118/EC establishing a list of wastes and hazardous waste pursuant to Council Directive 75/442/EEC on waste and Directive 91/689/EEC on hazardous waste with amendments.

Commission Regulation (EU) No 2015/830 of 28 May 2015.

Guidance

CHIP for everyone HSG228.

ECHA Guidance on the Application of the CLP Criteria.

ECHA Guidance on the compilation of safety data sheets.

Technical Guidance WM2: Hazardous Waste.

Introduction to Local Exhaust Ventilation HS(G)37.

15.2. Chemical safety assessment

Currently we do not have information from our suppliers about this.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet

DNEL: Derived No Effect Level.

PBT: Persistent, Bioaccumulative and Toxic substance.

PNEC: Predicted No Effect Concentration.

MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.

vPvB: Very Persistent and Very Bioaccumulative.

Revision date

12/07/2018

Revision

3

Supersedes date

14/06/2017

SDS number

20629

Risk phrases in full

R21/22 Harmful in contact with skin and if swallowed.

R22 Harmful if swallowed.

R37/38 Irritating to respiratory system and skin.

R41 Risk of serious damage to eyes.

R50 Very toxic to aquatic organisms.

Hazard statements in full

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

H373 May cause damage to organs (Kidneys, Liver) through prolonged or repeated exposure.

H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.