SAFETY DATA SHEET
POWER DE-ICER

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

1.1. Product identifier

Product name POWER DE-ICER

Product number A3200/03

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

Identified uses De-Icer

1.3. Details of the supplier of the safety data sheet

Supplier

NIELSEN CHEMICALS
RAWDON ROAD
MOIRA
SWADLINCOTE
DERBYSHIRE
DE12 6DA
info@nielsenchemicals.com
TEL: +44 (0) 1283 222277
FAX: +44 (0) 1283 550621

1.4. Emergency telephone number

Emergency telephone +44 (0) 777 8505 330

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Physical hazards Aerosol 1 - H222, H229

Health hazards Acute Tox. 4 - H302 Eye Irrit. 2 - H319 STOT RE 2 - H373

Environmental hazards Not Classified

Classification (67/548/EEC or 1999/45/EC) Xn;R22. F+;R12.

2.2. Label elements

Pictogram

Signal word Danger

POWER DE-ICER

Hazard statements

H222 Extremely flammable aerosol.
H229 Pressurised container: may burst if heated
H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn, even after use.
P260 Do not breathe vapour/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P330 Rinse mouth.
P337+P313 If eye irritation persists: Get medical advice/attention.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
P501 Dispose of contents/container in accordance with national regulations.

Contains ETHANEDIOL

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

Ethyl alcohol **30-60%**

CAS number: 64-17-5 EC number: 200-578-6 REACH registration number: 01-2119457610-43-xxxx

Classification	Classification (67/548/EEC or 1999/45/EC)
Flam. Liq. 2 - H225 Eye Irrit. 2 - H319	F;R11

ETHANEDIOL **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 STOT RE 2 - H373	Xn;R22

HYDROCARBON PROPELLANT **10-30%**

CAS number: 68476-85-7 EC number: 270-704-2

Classification	Classification (67/548/EEC or 1999/45/EC)
Flam. Gas 1 - H220 Press. Gas, Liquefied - H280	F+;R12.

POWER DE-ICER

PROPAN-2-OL		**1-5%**
CAS number: 67-63-0	EC number: 200-661-7	REACH registration number: 01-2119457558-25-xxxx

Classification	**Classification (67/548/EEC or 1999/45/EC)**
Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336 STOT SE 3 - H336	F;R11 Xi;R36 R67

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

Inhalation Move affected person to fresh air at once. Get medical attention if any discomfort continues.

Ingestion Rinse mouth thoroughly with water. Do not induce vomiting. Get medical attention.

Skin contact Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.

Eye contact Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

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

Inhalation Vapours may cause drowsiness and dizziness.

Ingestion May cause discomfort if swallowed.

Skin contact Prolonged contact may cause redness, irritation and dry skin.

Eye contact Irritation of eyes and mucous membranes.

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

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with the following media: Foam, carbon dioxide or dry powder.

5.2. Special hazards arising from the substance or mixture

Specific hazards Extremely flammable aerosol. Pressurised container: may burst if heated

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

5.3. Advice for firefighters

Protective actions during firefighting No specific firefighting precautions known.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions If aerosol cans are ruptured, care should be taken due to the rapid escape of the pressurised contents and propellant. Avoid inhalation of vapours and contact with skin and eyes.

POWER DE-ICER

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Absorb spillage with inert, damp, non-combustible material. Flush contaminated area with plenty of water.

6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Keep away from heat, sparks and open flame. Provide adequate ventilation.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store at temperatures between 4°C and 40°C.

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

Ethyl alcohol

Long-term exposure limit (8-hour TWA): WEL 1000 ppm 1920 mg/m³

ETHANEDIOL

Long-term exposure limit (8-hour TWA): WEL 10 mg/m3(Sk)
Short-term exposure limit (15-minute): WEL 104 mg/m3(Sk)

HYDROCARBON PROPELLANT

Long-term exposure limit (8-hour TWA): WEL 1000 ppm 1750 mg/m³
Short-term exposure limit (15-minute): WEL 1250 ppm 2180 mg/m³

PROPAN-2-OL

Long-term exposure limit (8-hour TWA): WEL 400 ppm 999 mg/m³
Short-term exposure limit (15-minute): WEL 500 ppm 1250 mg/m³

WEL = Workplace Exposure Limit

ETHANOL (CAS: 64-17-5)

Ingredient comments WEL = Workplace Exposure Limits

DNEL

Industry - Inhalation; Short term : 1900 mg/m³
Industry - Dermal; Long term : 343 mg/kg/day
Industry - Inhalation; Long term : 950 mg/m³
Consumer - Inhalation; Short term : 950 mg/m³
Consumer - Dermal; Long term : 206 mg/kg/day
Consumer - Inhalation; Long term : 114 mg/m³
Consumer - Oral; Long term : 87 mg/kg/day

POWER DE-ICER

PNEC	- Fresh water; 0.96 mg/l - Marine water; 0.79 mg/l - Soil; 0.62 mg/kg - STP; 580 mg/l

ETHANEDIOL (CAS: 107-21-1)

DNEL	Workers - Inhalation; Long term local effects: 35 mg/m³ Workers - Dermal; Long term systemic effects: 106 mg/kg/day General population - Inhalation; Long term local effects: 7 mg/m³ General population - Dermal; Long term systemic effects: 53 mg/kg/day
PNEC	- Fresh water; 10 mg/l - Marine water; 1 mg/l - Soil; 1.53 mg/l - Intermittent release; 10 mg/l - STP; 199.5 mg/l - Sediment (Freshwater); 20.9 mg/kg - Sediment (Marinewater); 3.7 mg/kg - Soil; 1.53 mg/kg

PROPAN-2-OL (CAS: 67-63-0)

DNEL	Industry - Dermal; Long term systemic effects: 888 mg/kg/day Industry - Inhalation; Long term systemic effects: 500 mg/m³ Consumer - Dermal; Long term systemic effects: 319 mg/kg/day Consumer - Oral; Long term systemic effects: 26 mg/kg/day Consumer - Inhalation; Long term systemic effects: 89 mg/m³
PNEC	- Fresh water; 140.9 mg/l - Marine water; 140.9 mg/l - Intermittent release; 140.9 mg/l - Sediment (Freshwater); 552 mg/kg - Sediment (Marinewater); 552 mg/kg - STP; 2251 mg/l - Soil; 28 mg/kg

8.2. Exposure controls

Protective equipment

Appropriate engineering controls	This product must not be handled in a confined space without adequate ventilation.
Eye/face protection	Personal protective equipment for eye and face protection should comply with European Standard EN166.
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. Wear protective gloves made of the following material: Rubber (natural, latex). Neoprene. Polyvinyl chloride (PVC).

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

POWER DE-ICER

Appearance	Aerosol.
Colour	Colourless.
Odour	Alcoholic.
Solubility(ies)	Soluble in water.

9.2. Other information

Other information	Not determined.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability	Stable at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Not determined.

10.4. Conditions to avoid

Conditions to avoid	Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

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

ATE oral (mg/kg)	1,508.29562594

Inhalation	Vapours may cause drowsiness and dizziness.
Ingestion	Gastrointestinal symptoms, including upset stomach.
Skin contact	Repeated exposure may cause skin dryness or cracking.
Eye contact	Irritation of eyes and mucous membranes.

Toxicological information on ingredients.

Ethyl alcohol

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	2,001.0
Species	Rat

POWER DE-ICER

ATE oral (mg/kg)	2,001.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	2,001.0
Species	Rabbit
ATE dermal (mg/kg)	2,001.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} vapours mg/l)	21.0
Species	Mouse
ATE inhalation (vapours mg/l)	21.0

Serious eye damage/irritation

Serious eye damage/irritation	Slightly irritating.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	NOAEL 1730 mg/kg, Oral,
Target organs	Gastro-intestinal tract Liver

Inhalation	Vapours in high concentrations are narcotic. Symptoms following overexposure may include the following: Headache. Fatigue. Dizziness. Nausea, vomiting.
Ingestion	Ingestion of large amounts may cause unconsciousness. May cause nausea, headache, dizziness and intoxication.
Skin contact	Repeated exposure may cause skin dryness or cracking.
Eye contact	Irritating to eyes.
Medical symptoms	EYES AND MUCOUS MEMBRANES. Irritation of eyes and mucous membranes. RESPIRATORY SYSTEM. Upper respiratory irritation. SKIN. Skin irritation. DIGESTIVE SYSTEM. Gastrointestinal symptoms, including upset stomach.

ETHANEDIOL

Acute toxicity - oral

ATE oral (mg/kg)	500.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	3,500.0
Species	Mouse
ATE dermal (mg/kg)	3,500.0

Acute toxicity - inhalation

POWER DE-ICER

Acute toxicity inhalation (LC_{50} vapours mg/l)	2,500.0
Species	Rat
ATE inhalation (vapours mg/l)	2,500.0

Inhalation	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Ingestion	Harmful if swallowed.
Skin contact	Repeated exposure may cause skin dryness or cracking.
Eye contact	Irritation of eyes and mucous membranes.
Acute and chronic health hazards	Prolonged contact may cause dryness of the skin. Prolonged and repeated contact with solvents over a long period may lead to permanent health problems.
Route of entry	Inhalation Ingestion
Target organs	Brain Respiratory system, lungs Mucous membranes
Medical symptoms	Skin irritation. Irritation of eyes and mucous membranes. High concentrations of vapours may irritate respiratory system and lead to headache, fatigue, nausea and vomiting.
Medical considerations	Skin disorders and allergies. Convulsive disorders, CNS problems. Risk of chemical pneumonia after aspiration.

HYDROCARBON PROPELLANT

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} vapours mg/l)	21.0
Species	Rat
ATE inhalation (vapours mg/l)	21.0

PROPAN-2-OL

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	4,700.0
Species	Rat
ATE oral (mg/kg)	4,700.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	16.4
Species	Rabbit

SECTION 12: Ecological Information

POWER DE-ICER

Ecotoxicity Not regarded as dangerous for the environment.

Ecological information on ingredients.

Ethyl alcohol

Ecotoxicity The product is not expected to be hazardous to the environment.

PROPAN-2-OL

Ecotoxicity The product is not expected to be toxic to aquatic organisms.

12.1. Toxicity

Acute toxicity - fish Not determined.

Ecological information on ingredients.

Ethyl alcohol

Toxicity	Not considered toxic to fish.
Acute toxicity - fish	Not determined. LC50, 48 hours, 48 hours: > 100 mg/l, Leuciscus idus (Golden orfe) LC_{50}, 96 hours: 11.000 mg/l, Fish
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 12.34 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, hours: mg/l, Selenastrum capricornutum

ETHANEDIOL

Acute toxicity - fish	LC_{50}, 96 hours: 7286 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: > 100 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{80}, 96 hours: 6,500 - 13,000 mg/l, Selenastrum capricornutum
Chronic toxicity - fish early life stage	NOEC, 7 days: 15,380 mg/l, Pimephales promelas (Fat-head Minnow)
Chronic toxicity - aquatic invertebrates	NOEC, 7 days: 8590 mg/l, Freshwater invertebrates

PROPAN-2-OL

Toxicity	Not considered toxic to fish.
Acute toxicity - fish	LC50, 96 hours, 96 hours: 9640 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	EC_{50}, : 9714 mg/l, Daphnia magna EC_{50}, 48 hours: >100 mg/l, Daphnia magna

POWER DE-ICER

Acute toxicity - aquatic plants	EC_{50}, 72 hours, 72 hours: > 100 mg/l, Scenedesmus subspicatus IC_{50}, 72 hours: >100 mg/l, Algae

12.2. Persistence and degradability

Persistence and degradability The product is expected to be biodegradable.

Ecological information on ingredients.

Ethyl alcohol

Persistence and degradability	The product is readily biodegradable.
Biodegradation	- Half-life : 1 - <10

ETHANEDIOL

Persistence and degradability	The product is readily biodegradable.

PROPAN-2-OL

Persistence and degradability	The product is readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential The product is not bioaccumulating.

Ecological information on ingredients.

Ethyl alcohol

Bioaccumulative potential	The product is not bioaccumulating.
Partition coefficient	: -0.031

ETHANEDIOL

Partition coefficient	: -1.36

PROPAN-2-OL

Bioaccumulative potential	The product is not bioaccumulating.

12.4. Mobility in soil

Mobility The product is soluble in water.

Ecological information on ingredients.

Ethyl alcohol

Mobility	The product contains volatile organic compounds (VOCs) which will evaporate easily from all surfaces.

PROPAN-2-OL

POWER DE-ICER

Mobility The product is soluble in water.

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.

PROPAN-2-OL

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 determined.

Ecological information on ingredients.

Ethyl alcohol

Other adverse effects Not known.

PROPAN-2-OL

Other adverse effects Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) 1950

UN No. (IMDG) 1950

UN No. (ICAO) 1950

14.2. UN proper shipping name

Proper shipping name (ADR/RID) AEROSOLS

Proper shipping name (IMDG) AEROSOLS

Proper shipping name (ICAO) AEROSOLS

Proper shipping name (ADN) AEROSOLS

14.3. Transport hazard class(es)

ADR/RID class 2.1

IMDG class 2.1

ICAO class/division 2.1

POWER DE-ICER

Transport labels

14.4. Packing group

ADR/RID packing group 5F

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

14.6. Special precautions for user

Tunnel restriction code (D)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

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

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

15.2. Chemical safety assessment

SECTION 16: Other information

Revision date 29/06/2015

Revision 2.1

Supersedes date 08/01/2015

Risk phrases in full
R11 Highly flammable.
R12 Extremely flammable.
R22 Harmful if swallowed.
R36 Irritating to eyes.
R67 Vapours may cause drowsiness and dizziness.

Hazard statements in full
H220 Extremely flammable gas.
H222 Extremely flammable aerosol.
H225 Highly flammable liquid and vapour.
H229 Pressurised container: may burst if heated
H280 Contains gas under pressure; may explode if heated.
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.
H373 May cause damage to organs through prolonged or repeated exposure if swallowed.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.