MSDS PRO & ECONOMY SNOW FLUID – PREMIUM FLUIDS

Issue Date: July 5th, 2018

MATERIAL SAFETY DATA SHEET

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

1.1. Product Identifier

Product name: PRO & ECONOMY SNOW FLUID – PREMIUM FLUIDS
Chemical product name: No data available
Synonyms: SNOW FLUID READY-TO-USE / RTU / SNOW FLUID CONCENTRATED / CC
Proper shipping name: None
Chemical formula: No data available
Other means of identification: No data available
Index number: No data available
ID number: No data available
CAS number: No data available
REACH registration number: No data available
EC number: Not data available

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

Relevant identified uses: Artificial snow water based
Uses advised against: No data available

1.3. Details of the supplier of the safety data sheet

1.4. Emergency telephone number

Emergency telephone number:
ORFILA (France) +33(0)1 45 42 59 59
UK : +44(0)2087628322

Other emergency telephone numbers:
+33(0)6 08 63 04 52

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

DSD classification: Non applicable
DPD classification: None
CLP classification: None

2.2. Label elements

CLP label elements

Signal word: None
Hazard statement(s): None
Precautionary statement(s): None under normal conditions of used

DSD / DPD label elements

Indication(s) of danger: CONSIDERED A NON DANGEROUS SUBSTANCE ACCORDING TO DIRECTIVE 67/548/EEC AND ITS AMENDMENTS.
Safety advice: None under normal conditions of used

2.3. Other hazards

No data available

PBT/vPvB criteria No data available

SECTION 3: Composition / information on ingredients

3.1. Substances

1. CAS No 2. EC No 3. Index No 4. REACH No	%[weight]	Name	Classification according to 1999/45/CE Directive	Classification according to 1272/2010/CE Regulation
1. 112-34-5 2. 203-961-6 3. 603-096-00-8 4. No data available	<9	diethylene glycol monobutyl ether	Xi R36	H319 Eye Irrit 2
1. N/A 2. N/A 3. N/A 4. No data available	<9	Mixture of hydrocarbon surfactants		
1. 102-71-6 2. 203-049-8 3. No data available 4. No data available	<0.4	2,2,2''-nitrilotriethanol		

3.2. Mixtures

See 'Information on ingredients' in section 3.1

SECTION 4: First aid measures

4.1. Description of first aid measures

General: No data available

Ingestion: Immediately give a glass of water. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Eye Contact:
If this product comes in contact with the eyes: Wash out immediately with fresh running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Seek medical attention without delay; if pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin Contact:
If skin or hair contact occurs: Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.

Inhalation: If fumes, aerosols or combustion products are inhaled remove from contaminated area. Other measures are usually unnecessary.

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

Inhaled:

The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

One case report describes kidney and liver damage in two people working in a closed room with paint containing diethylene glycol monobutyl ether and at the same time consuming large quantities of alcoholic beverages.

It has as yet not been established whether the glycol ether and alcohol have synergistic effects but it is possible that oxidation and elimination of both substances probably involves alcohol dehydrogenases; competitive inhibition would be the result.

Ingestion:

Although ingestion is not thought to produce harmful effects (as classified under EC Directives), the material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney)

damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health).

Skin Contact:

The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.

There are indications that diethylene glycol monobutyl ether is absorbed through intact skin. Toxic effects only occur at very high doses.

Eye:

Evidence exists, or practical experience predicts, that the material may cause severe eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals.

Eye contact may cause significant inflammation with pain.

Chronic:

Long-term exposure to the product is not thought to produce chronic effects adverse to health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Water spray or fog. Foam. Dry chemical powder. BCF (where regulations permit).

5.2. Special hazards arising from the substrate or mixture

Fire Incompatibility: None known

5.3. Advice for firefighters

Fire Fighting:

Alert Fire Brigade and tell them location and nature of hazard. Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Use water delivered as a fine spray to control fire and cool adjacent area.

Fire/Explosion Hazard:

Combustible. Slight fire hazard when exposed to heat or flame. Heating may cause expansion or decomposition leading to violent rupture of containers. On combustion, may emit irritating/ toxic fumes. May emit corrosive fumes.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal Protective Equipment:

Glasses:	Gloves:	Respirator:
Chemical goggles.	PVC chemical resistant type.	Type A Filter of sufficient capacity

Minor Spills:

Remove all ignition sources. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact by using protective equipment.

Major Spills:

Moderate hazard. Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water course.

6.2. Environmental precautions

Not applicable

6.3. Methods and material for containment and cleaning up

Not applicable

6.4. Reference to other sections

Personal Protective Equipment advice is contained in Section 8 of the MSDS

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Safe handling

The tendency of many ethers to form explosive peroxides is well documented. Ethers lacking non-methyl hydrogen atoms adjacent to the ether link are thought to be relatively safe. DO NOT concentrate by evaporation, or evaporate extracts to dryness, as residues may contain explosive peroxides with DETONATION potential. Any static discharge is also a source of hazard. Before any distillation process remove trace peroxides by shaking with excess 5% aqueous ferrous sulfate solution or by percolation through a column of activated alumina. Distillation results in uninhibited ether distillate with considerably increased hazard because of risk of peroxide formation on storage. The substance accumulates peroxides which may become hazardous only if it evaporates or is concentrate the peroxides. The substance may concentrate around the container opening for example.Purchases of peroxidisable chemicals should be restricted to ensure that the chemical is used completely before it can become peroxidised. A responsible person should maintain an inventory of peroxidisable chemicals or annotate the general chemical inventory to indicate which chemicals are subject to peroxidation. An expiration date should be determined. The chemical should either be treated to remove peroxides or disposed of before this date. Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps.

Fire and explosion protection See section 5

Other information

Store in original containers. Keep containers securely sealed. No smoking, naked lights or ignition sources. Store in a cool, dry, well-ventilated area.

7.2. Conditions for safe storage, including any incompatibilities

Suitable container:

Metal can or drum Packaging as recommended by manufacturer. Check all containers are clearly labelled and free from leaks.

Storage incompatibility:

Glycol ethers may form peroxides under certain conditions; the potential for peroxide formation is enhanced when these substances are used in processes such as distillation where they are concentrated or even evaporated to near-dryness or dryness; storage under a nitrogen atmosphere is recommended to minimise the possible formation of highly reactive peroxides Nitrogen blanketing is recommended if transported in containers at temperatures within 15 deg C of the flash-point and at or above the flash-point - large containers may first need to be purged and inerted with nitrogen prior to loading In the presence of strong bases or the salts of strong bases, at elevated temperatures, the potential exists for runaway reactions. Contact with aluminium should be avoided; release of hydrogen gas may result- glycol ethers will corrode scratched aluminium surfaces. None known

Package Material Incompatibilities: No data available

7.3. Specific end use(s)

See section 1.2

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Occupational Exposure Limits (OEL)

Source	Material	TWA ppm	TWA mg/m³	STEL ppm	STEL mg/m³	Peak ppm	Peak mg/m³	TWA F/CC	Notes
EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)	diethylene glycol monobutyl ether (2-(2-Butoxyethoxy) ethanol)	10	67.5	15	101.2				
European Union (EU) Commission Directive 2006/15/EC establishing a second list of indicative occupational exposure limit values (IOELVs)	diethylene glycol monobutyl ether (2-(2-Butoxyethoxy)ethanol)	10	67,5	15	101,2				

UK Workplace Exposure Limits (WELs)	diethylene glycol monobutyl ether (2-(2-Butoxyethoxy) ethanol)	10	67.5	15	101.2				R36

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

8.2.2. Personal protection

Eye and face protection:

Safety glasses with side shields. Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

Skin protection: See Hand protection: below

Hand protection:

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: frequency and duration of contact, chemical resistance of glove material, glove thickness and dexterity Wear chemical protective gloves, eg. PVC. Wear safety footwear or safety gumboots, eg. Rubber

Body protection: See Other protection: below

Other protection:

Overalls. P.V.C. apron. Barrier cream. Skin cleansing cream.

Respiratory protection: Type A Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Thermal hazards: No data available

Recommended material(s): Not applicable

8.2.3. Environmental exposure controls

See section 12

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Fluid liquid
Odour	None
Odour threshold	No applicable
pH (1% solution)	No data available
pH (as supplied)	7.3-7.8
Melting point / freezing point (°C)	-7
Initial boiling point and boiling range (°C)	100
Flash point (°C)	>100
Evaporation rate	No data available
Flammability	None
Vapour pressure (kPa)	No data available
Vapour density (Air = 1)	No data available
Relative density (Water = 1)	1.03 at 20°C
Solubility in Water	Miscible

Partition coefficient: n-octanol / water	No data available
Auto-ignition temperature (°C)	No data available
Critical temperature (°C)	No data available
Viscosity (cSt)	18 cSt@20°C
Explosive properties	No data available
Oxidising properties	No data available
Upper Explosive Limit (%)	No data available
Lower Explosive Limit (%)	No data available

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity See section 7.2

10.2. Chemical stability Presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.

10.3. Possibility of hazardous reactions See section 7.2

10.4. Conditions to avoid See section 7.2

10.5. Incompatible materials See section 7.2

10.6. Hazardous decomposition products See section 5.3

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Mutagenicity: No data available

Reproductive Toxicity: No data available

Carcinogenicity: No data available

STOT - single exposure: No data available

DIETHYLENE GLYCOL MONOBUTYL ETHER: unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY	IRRITATION
Oral (rat) LD50: 5660 mg/kg	Eye (rabbit): 5 mg - SEVERE
Dermal (rabbit) LD50: 4120 mg/kg	Eye (rabbit): 20 mg/24h Moderate

The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. For diethylene glycol monoalkyl ethers and their acetates: This category includes diethylene glycol ethyl ether (DGEE), diethylene glycol propyl ether (DGPE) diethylene glycol butyl ether (DGBE) and diethylene glycol hexyl ether (DGHE) and their acetates. Acute toxicity: There are adequate oral, inhalation and/or dermal toxicity studies on the category members.

SECTION 12: Ecological information

12.1. Toxicity

Fish: No data available

Daphnia Magna: No data available

Algae: No data available

Toxic to aquatic micro-organisms: No data available

DIETHYLENE GLYCOL MONOBUTYL ETHER:
For glycol ethers:
Environmental fate:
Ether groups are generally stable to hydrolysis in water under neutral conditions and ambient temperatures. OECD guideline studies indicate ready biodegradability for several glycol ethers although higher molecular weight species seem to biodegrade at a slower rate.
For diethylene glycol monoalkyl ethers and their acetates:
The diethylene glycol ethers are soluble in water. Octanol-water partition coefficients (log Kow values) range from -0.69 to +1.3.
Environmental fate:
Estimated hydroxyl radical-induced atmospheric photodegradation half-lives range from 3.18 to 4.41 hours.
DO NOT discharge into sewer or waterways.
log Kow 0.15-1.0 Koc: 75 BOD 5 if unstated: 0.25 COD: 2.08 log BCF: 0.46

12.2. Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
SNOW FLUID	No Data Available	No Data Available
diethylene glycol monobutyl ether	LOW	No Data Available

12.3. Bioaccumulative potential

Ingredient	Bioaccumulation
diethylene glycol monobutyl ether	LOW

12.4. Mobility in soil

Ingredient	Mobility
diethylene glycol monobutyl ether	HIGH (ESTIMATED)

12.5. Results of PBT and vPvB assessment

	P	B	T
Relevant available data	No data available	No data available	No data available
PBT and vPvB Criteria fulfilled?	No data available	No data available	No data available

12.6. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product / Packaging disposal:
Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. A Hierarchy of Controls seems to be common - the user should investigate:Reduction **DO NOT** allow wash water from cleaning or process equipment to enter drains. It may be for treatment before disposal. In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. Where in doubt contact the responsible authority. Recycle wherever possible or consult manufacturer for recycling options. Consult State Land Waste Management Authority for disposal. Bury residue in an authorised landfill. Recycle containers if possible, or dispose of in an authorised landfill.

Waste treatment options: No data available

Sewage disposal options: No relevant data

Other disposal recommendations: No data available

SECTION 14: Transport information

Labels Required: No

Land transport (ADR / RID / GGVSE)

14.1. UN number	No	**14.4. Packing group**	No
14.2. UN proper shipping name	No	**14.5. Environmental hazard**	No
14.3. Transport hazard class(es)	No	**14.6. Special precautions for user**	Hazard identification (Kemler) No Classification Code No Hazard Label No Special provisions No Add limited quantity No

Air transport (ICAO-IATA / DGR)

14.1. UN number	No	**14.4. Packing group**	No
14.2. UN proper shipping name	No	**14.5. Environmental hazard**	No

14.3. Transport hazard class(es)	ICAO/IATA Class: No ICAO/IATA Subrisk: No ERG Code No	**14.6. Special precautions for user**	Special provisions No Cargo Only Packing Instructions No Cargo Only Maximum Qty / Pack No Passenger and Cargo Packing Instructions No Passenger and Cargo Maximum Qty / Pack No Passenger and Cargo Limited Quantity Packing Instructions No Passenger and Cargo Maximum Qty / Pack No

Sea transport (IMDG-Code / GGVSee)

14.1. UN number	No	**14.4. Packing group**	No
14.2. UN proper shipping name	No	**14.5. Environmental hazard**	No
14.3. Transport hazard class(es)	No **IMDG Subrisk** No	**14.6. Special precautions for user**	EMS Number No Special provisions No Limited Quantities No

Inland waterways transport (ADNR / River Rhine)

14.1. UN number	No	**14.4. Packing group**	No
14.2. UN proper shipping name	No	**14.5. Environmental hazard**	No
14.3. Transport hazard class(es)	No **ADNR Label** No	**14.6. Special precautions for user**	Classification code No Limited quantity No Equipment required No Fire cones number No

14.7. Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC code

No data available

SECTION 15: Regulatory information

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

Regulations for ingredients

diethylene glycol monobutyl ether (CAS: 112-34-5) is found on the following regulatory lists;

"EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)","EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles","European Chemicals Agency (ECHA) List of substances identified for registration in 2010","European Customs Inventory of Chemical Substances (English)","European Trade Union Confederation (ETUC) Priority List for REACH Authorisation","European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)","European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling

of Dangerous Substances - updated by ATP: 31","European Union (EU) Commission Directive 2006/15/EC establishing a second list of indicative occupational exposure limit values (IOELVs)","European Union (EU) Inventory of Fragrance Ingredients (Perfume and Aromatic Raw Materials)","European Union (EU) Inventory of Ingredients used in Cosmetic Products","European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI","IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances","International Fragrance Association (IFRA) Survey: Transparency List","UK Workplace Exposure Limits (WELs)"

No data for SNOW FLUID

This safety data sheet is in compliance with the following EU legislation and its adaptations – as far as applicable - : 67/548/EEC, 1999/45/EC, 98/24/EC, 92/85/EEC, 94/33/EC, 91/689/EEC, 1999/13/EC, Regulation (EU) No 453/2010, Regulation (EC) No 1907/2006, Regulation (EC) No 1272/2008, and their amendments as well as the following British legislation:

- The Control of Substances Hazardous to Health Regulations (COSHH) 2002

- COSHH Essentials

- The Management of Health and Safety at Work Regulations 1999

15.2. Chemical safety assessment

ANNEX 1

Ingredient	Annex 1 67/548/EEC
diethylene glycol monobutyl ether	603-096-00-8

SECTION 16: Other information

RISK

Risk Codes	Risk Phrases
R36	Irritating to eyes
H319	Causes serious eye irritation

ANNEX 2: Indications of Danger

Xi	Irritant

OTHER

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references
The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.
For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:
EN 16 Personal eye protection
EN 340 Protective clothing
EN 374 Protective gloves against chemicals and micro-organisms
EN 13832 Footwear protecting against chemicals
EN 133 Respiratory protective devices

This Material Safety Data Sheet in conforming to Regulations (EC) No 1907/2006, (EC) No 1272/2008 and their amendments deletes and replaces MSDS past issued.