

SAFETEMP® ES PLUS

SAFETY DATA SHEET

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: SafeTemp® ES Plus

General or Generic ID: De-icing/Anti-icing fluid, SAE Type I.

Manufacturer's Name (same as Supplier): Inland Technologies International Ltd.
P.O. Box 253, 14 Queen Street
Truro, Nova Scotia
B2N 5C1 Canada
Phone: (877) 633-5263

Technical Contact: amcleod@inlandgroup.ca

Marketing Contact: bpace@inlandgroup.ca

Recommended Use: Aircraft de-icing fluid.

Restricted Use: Not known.

Emergency Telephone: PERS: (800) 633-8253

SECTION 2. HAZARDS IDENTIFICATION

Hazard Classification: No applicable GHS categories.

Label Elements: Using the Toxicity Data listed in Section 11 and 12, the product is labelled as follows.

Hazard Symbol: None

Signal Word: None

Hazard Statement: None

Precautionary Statements: None

Other Hazards Which Do Not Result in GHS Classification: None

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Identity:</u>	<u>Common Name and Synonyms:</u>	<u>CAS Number:</u>	<u>Content in Percent (%):</u>
Propylene Glycol	De-icing/Anti-icing fluid, SAE Type I	57-55-6	85%–90%
Water	H ₂ O, Water	7732-18-5	10%–15%
Enzyme Complex	Not Applicable.	Proprietary	<1%

SECTION 4. FIRST AID MEASURES

General Information:	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
Ingestion:	If swallowed, obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.
Inhalation:	Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious, place in the recovery position and obtain immediate medical attention. Give nothing by mouth.
Skin Contact:	Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.
Eye Contact:	Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.

Most Important Symptoms/Effects, Acute and Delayed:

Eye:	May be slightly irritating to eyes.
Skin:	May be slightly irritating to skin (may include redness, drying, and cracking of skin).
Inhalation:	Not expected to be an inhalation hazard under normal conditions.

Indication of Immediate Medical Attention and Special Treatment Needed:

Treatment:	Treat symptomatically. Symptoms may be delayed.
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SECTION 5. FIRE FIGHTING MEASURES

General Fire Hazards:	Non-flammable by OSHA criteria.
Extinguishing Media:	Dry Chemical, BC/ABC or CO ₂ .
Special Hazards Arising from the Substance or Mixture:	Hazardous Decomposition: Oxides of carbon and sulphur, formaldehyde gas and thiols.
Special Protective Equipment and Precautions for Firefighters:	Evacuate area of all unnecessary personnel. Cool closed containers exposed to fire by spraying them with water. Do not allow run off water and contaminants from firefighting to enter drains or water ways.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:	Put on appropriate personal protective equipment (see Section 8). Isolate the hazard area and deny entry to unnecessary and unprotected personnel.
Methods and Material for Containment and Cleaning:	Contain spillage and then collect with non-combustible absorbent material (e.g., sand, earth, vermiculite) and place in container for disposal according to local and national regulations (see Section 13).
Environmental Precautions:	Do not allow spills to enter drains or waterways. Avoid breathing vapours when spraying. Avoid contact with skin and eyes. Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling:	Avoid contact with skin and eyes. Avoid breathing vapours and mist when spraying.
Conditions for Safe Storage (including any incompatibilities):	Use UV resistant containers. Handle containers carefully to prevent damage and spillage. Keep away from direct heat.
Temperature Storage Limits:	Minimum -45 °C (-50 °F) Maximum 60 °C (140 °F)
Incompatible Materials:	Strong oxidizers, strong acids and alkali metals.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters:

Exposure:	No established exposure limits for this product.
Carcinogen Data:	No established chemicals at levels which require reporting for this product.

Exposure Controls/Individual Protection Measures, Such as Personal Protective Equipment:

Respiratory Protection:	No special respiratory protection is usually necessary. Breathing of mist/aerosol should be avoided. If operating conditions create high airborne concentration of this material, the use of an approved respirator is recommended.
Eye/Face Protection:	Safety glasses or goggles are recommended.
Skin Protection:	No special skin protection is usually necessary. Chemical resistant gloves should be worn if prolonged exposure is possible to prevent drying of skin.
Engineering Controls:	No special ventilation is necessary.
Other Work Practices:	Do not eat, smoke or drink where material is handled, processed or stored. Wash hands before eating, drinking, smoking or using toilet. Ensure that eyewash stations are accessible. Promptly remove soiled clothing and wash thoroughly before reuse.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	<i>Physical State:</i> Liquid <i>Form:</i> Liquid <i>Colour:</i> Orange
Odour:	Sweet
Odour Threshold:	Not Measured.
pH:	7.25–8.25
Melting Point/Freezing Point:	<-60 °C (<-76 °F)
Initial Boiling Point and Boiling Range:	100 °C (212 °F)
Flash Point:	>100 °C (>212 °F) - Closed Cup
Evaporation Rate:	No data available.
Flammability (solid/gas):	Not Applicable.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Upper/Lower Limit on Flammability or Explosive Limits:	No data available.
Vapor Pressure:	No data available.
Vapor Density (AIR = 1):	No information found.
Specific Gravity (20 °C):	1.045
Solubility in Water:	Fully miscible.
Partition Coefficient (n-octanol/water):	No data available.
Auto-ignition Temperature:	No data available.
Decomposition Temperature:	No data available.
Viscosity (20 °C):	30 cP
Explosive Properties:	No data available.
Oxidizing Properties:	Not corrosive to metals.

SECTION 10. STABILITY AND REACTIVITY

Reactivity:	None under normal conditions of use.
Chemical Stability:	Stable under normal conditions.
Possibility of Hazardous Reactions:	No dangerous reactions known under conditions of normal use.
Conditions to Avoid:	High temperatures and contact with incompatible materials.
Incompatible Materials:	Strong oxidizers, strong acids and alkali metals.
Hazardous Decomposition Products:	May include but not limited to oxides of carbon and sulphur, formaldehyde gas and thiols.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects:

Acute Toxicity:

Ingredient	Oral LD₅₀ mg/kg	Skin LD₅₀ mg/kg	Inhalation Vapor LD₅₀ mg/L/4hr	Inhalation Dust/Mist LD₅₀ mg/L/4hr	Inhalation Gas LD₅₀ ppm
Propylene Glycol (57-55-6)	20,000.00, Rat - Category: NA	20,800.00, Rabbit - Category: NA	105.00, Rat - Category: NA	No data available.	No data available.
Enzyme Complex (Proprietary)	No data available.	No data available.	No data available.	No data available.	No data available.

Note: When no route specific LD₅₀ data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

<u>Classification:</u>	<u>Hazard Description:</u>
Acute Toxicity:	<i>Oral:</i> Not Applicable. <i>Dermal:</i> Not Applicable.

SECTION 11. TOXICOLOGICAL INFORMATION

	<i>Inhalation:</i> Not Applicable.
Repeated Dose Toxicity:	Not Applicable.
Skin Corrosion/Irritation:	Not Applicable.
Serious Eye Damage/Eye Irritation:	Not Applicable.
Respiratory or Skin Sensitization:	Not Applicable.
Carcinogenicity:	Not Applicable.
Germ Cell Mutagenicity:	Not Applicable.
Reproductive Toxicity:	Not Applicable.
Specific Target Organ Toxicity (single exposure):	Not Applicable.
Specific Target Organ Toxicity (repeated exposure):	Not Applicable.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity:

Fish:	LC ₅₀ , Pimephales promelas (Fathead Minnow), 96 h: 8,125 mg/L
Aquatic Invertebrates:	EC ₅₀ , Daphnia magna (Water Flea), 48 h, immobilization: 42,050 mg/L

Persistence and Degradability:

Biodegradation:	This product is biodegradable.
BOD and COD Ratio	5-day BOD/COD: 0.42 BOD₅: (20 °C) 0.65 g O ₂ /g de-icer COD: 1.53 g O ₂ /g de-icer
Bioaccumulative Potential:	Bioconcentration potential is not expected.
Mobility in Soil:	No data available.
Results of PBT and vPvB Assessment:	This product contains no PBT/vPvB chemicals.
Other Adverse Effects:	No data available.

SECTION 13. DISPOSAL CONSIDERATION

Waste Treatment Methods: Observe all federal, state and local regulations when disposing of this substance.

SECTION 14. TRANSPORT INFORMATION

Canadian Transportation of Dangerous Goods Act:	Not regulated.
US DOT:	Not regulated.
IMDG:	Not regulated.
IATA:	Not regulated.

SECTION 15. REGULATORY INFORMATION

Regulatory Overview:	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.
Toxic Substance Control Act (TSCA):	All components of this material are either listed or exempt from listing on the TSCA Inventory.
WHMIS Classification:	Not Regulated.
US EPA Tier II Hazards:	<i>Fire:</i> No <i>Sudden Release of Pressure:</i> No <i>Reactive:</i> No <i>Immediate (Acute):</i> No <i>Delayed (Chronic):</i> No
EPCRA 311/312 Chemicals and RQS:	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
EPCRA 302 Extremely Hazardous:	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
EPCRA 313 Toxic Chemicals:	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
Proposition 65 – Carcinogens (>0.0%):	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
Proposition 65 – Developmental Toxins (>0.0%):	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
Proposition 65 – Female Repro Toxins (>0.0%):	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
Proposition 65 – Male Repro Toxins (>0.0%):	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
New Jersey RTK Substances (>1%):	Propylene Glycol
Pennsylvania RTK Substances (>1%):	Propylene Glycol

SECTION 16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.



Acronyms:

ACGIH	American Conference of Governmental Industrial Hygienists
IARC	International Agency for Research on Cancer
LEL	Lower Explosive Limit
mg/m ³	Milligrams per Cubic Meter
N/A	Not Applicable
NTP	National Toxicology Program
°C	Degree Celsius
°F	Degree Fahrenheit
OSHA	Occupational Safety and Health Administration
PEL	OSHA Permissible Exposure Limit
ppm	Parts Per Million
STEL	Short Term Exposure Limit
TLV	ACGIH Threshold Limit Value
TWA	Time Weighted Average
UEL	Upper Explosive Limit
UN	United Nations

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