Polaris Material Safety Data Sheet

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Information: **763-542-0500**

SECTION 1 CHEMICAL PRODUCT IDENTIFICATION

Product: **Polaris Fuel De-Icer**
Synonyms: Isopropyl
CAS Registry Number: 67-63-0
MSDS Code; 0134
Product Type: Fuel additive
Preparation/Revision Date: 8/4/2010

SECTION 2 HAZARDOUS COMPOSITION INFORMATION

INGREDIENTS	CAS #	%	ACGIH TWA	OSHA PEL	OSHA STEL	SKIN
Isopropyl alcohol	67-63-0	100	400 ppm	400 ppm	500 ppm	NO

SECTION 3 HAZARDOUS IDENTIFICATION

WARNING:
- FLAMMABLE
- CAUSES EYE IRRITATION
- MAY CAUSE SKIN IRRITATION
- VAPORS MAY CAUSE RESPIRATORY IRRITATION
- HARMFUL IF SWALLOWED

Eye contact: This product contains materials that cause eye irritation with discomfort, tearing, or blurring of vision.

Skin contact: Avoid prolonged skin contact. This product contains materials that may cause skin irritation. Prolonged or repeated contact may result in dermatitis (dryness, chapping and reddening of skin).

Inhalation: Overexposure by inhalation of material may cause nonspecific discomfort, such as nausea, headache, or weakness. Caution should be taken to prevent aerosolization or misting of this product without proper respiratory protection.

Ingestion: Do not ingest. Irritating to the gastrointestinal tract, causing abdominal pain and vomiting, sometimes bloody. Ingestion may cause central nervous system depression, lower blood pressure, increase heart beat and cause liver damage.

Other: In extreme overexposure conditions, unconsciousness, respiratory depression and death may occur.

SECTION 4 FIRST AID MEASURES

Eye contact: Immediately flush eyes with large amounts of water and continue flushing until irritation subsides. If irritation persists call a physician.

Skin contact: Remove contaminated clothing. Wash contaminated area thoroughly with soap and water. If redness or irritation occurs, seek medical attention. Wash contaminated clothing before reuse.

Inhalation: If overcome by inhalation of vapors, remove to fresh air. Use oxygen if there is difficulty breathing or artificial respiration if breathing has stopped. Do not leave victim unattended. Seek immediate medical attention if necessary.

Ingestion: Do not give liquids if victim is unconscious or very drowsy. Otherwise, give no more than 2 glasses of water and induce vomiting by giving 30 cc (2 tablespoons) Syrup of Ipecac. If Ipecac is unavailable, give 2 glasses of water and induce vomiting by touching finger to back of victim's throat. Keep victim's head below hips while vomiting. Get immediate medical attention.

Note: If victim is a child, give no more than 1 glass of water and 15 cc (1 tablespoon) Syrup of Ipecac. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before emesis, gastric lavage should be considered following intubation with a cuffed endotracheal tube.

Other: Not applicable.

SECTION 5 FIRE FIGHTING MEASURES

Flash point: 12°C (53°F) by Tag Closed Cup Tester.

Flammable limits: Lower explosive limit - 2%. Upper explosive limit - 12%.

Extinguishing media: Use dry chemical, foam, water fog or carbon dioxide.

Special firefighting procedures: CAUTION - Lighter alcohols burn with an almost invisible blue flame. Clear area of unprotected personnel. Do not enter confined space without full bunker gear, including a positive pressure NIOSH approved self-contained breathing apparatus. Water may be used to dilute the alcohol - reduce burning intensity. Water may be ineffective on a large fire but can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Unusual fire & explosion hazards: Overheated containers may rupture/explode due to vapor pressure buildup. Dense smoke may be generated while burning. Toxic fumes, gases or vapors may evolve on burning. Heavy flammable vapors may settle along ground level and low spots to create an invisible fire hazard. The vapors may extend to sources of ignition and flash back.

Byproducts of combustion: Oxides of carbon.

Autoignition temperature: 456°C (825°F).

Explosion data: Not determined. Care should always be exercised in dust/mist areas.

Other: CAUTION - product may burn with an almost invisible flame. Product is fully miscible with water, but may still burn when diluted (until the product is gone).

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill control procedures (land): Immediately turn off or isolate any source of ignition (pilot lights, electrical equipment, flames, heaters, etc.). Evacuate area and ventilate. Personnel wearing proper protective equipment should contain spill immediately with inert materials (sand, earth, chemical spill pads of cotton) by forming dikes. Dikes should be placed to contain spill in a manner that will prevent material from entering sewers and waterways. Large spill, once contained, may be picked up using explosion proof, non-sparking vacuum pumps, shovels, or buckets, and disposed of in suitable containers for disposal. If a large spill occurs notify appropriate authorities.

Spill control procedures (water): Product is fully miscible with water. If a large spill occurs notify appropriate authorities (normally the National Response Center or Coast Guard).

Waste disposal method: Product is classified as an ignitable waste under RCRA, hazardous waste number D001 if unadulterated. All disposals must comply with federal, state, and local regulations. The material, if spilled or discarded may be a regulated waste. Refer to state and local regulations. Department of Transportation regulations may apply for transporting this material when spilled. See Section 14.

Other: CAUTION - If spilled material is cleanded up using a regulated solvent, the resulting waste mixture will be regulated.

SECTION 7 HANDLING AND STORAGE

Handling procedures: Metal drums to be properly grounded. Keep containers closed when not in use.

	Do not transfer to unmarked containers. Fire extinguishers should be kept readily available. See NFPA 30 and OSHA 1910.106 -- Flammable and Combustible Liquids. Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld, or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.
Storage procedures:	Store containers away from heat, sparks, open flame, or oxidizing materials. Properly ground metal containers.
Additional information:	Do not store or handle in aluminum equipment at temperatures above 49°C (120°F).

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Personal protection:	Applicable mainly to persons in repeated contact situations such as packaging of product, service/maintenance, and cleanup/spill control personnel.
Respiratory protection:	None required if airborne concentrations are maintained below threshold limits listed on page one. Otherwise a respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements must be followed. Where misting may occur, wear an MSHA/NIOSH approved (or equivalent) half-mask form dust/mist air purifying respirator.
Eye protection:	Eye protection is recommended. If material is handled such that it could be splashed into the eyes, wear safety glasses with side shields or vented/splash proof goggles (ANSI Z87.1 or approved equivalent).
Hand protection:	Impervious gloves such as neoprene or nitrile rubber to avoid skin sensitization and absorption.
Other protection:	Use of an apron and overboots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization and absorption. If handling hot material use insulated protective equipment. Launder soiled clothes. Properly dispose of contaminated leather articles and other materials which cannot be decontaminated.
Local control measures:	Use adequate ventilation when working with material in an enclosed area. Mechanical methods such as fume hoods or area fans may be used to reduce localized vapor/mist areas. If vapor or mist is generated when the material is heated or handled, adequate ventilation in accordance with good engineering practice must be provided to maintain concentrations below the specified exposure. Eyewash stations and showers should be available in areas where this material is used and stored.
Other:	Consumption of food and drink should be avoided in work areas where product is present. Always wash hands and face with soap and water before eating, drinking or smoking.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Vapor pressure:	32 mmHg at 20°C (68°F).
API gravity:	47.8° at 15.6°C (60.0°F).
Density:	6.60 lbs/gal at 15.6°C (60.0°F).
Specific gravity:	0.79 at 15.6°C (60.0°F).
Solubility:	Fully miscible with water.
Percent volatile:	100% volume.
Vapor density (air=1):	2.1.
Evaporation rate (n-Butyl Acetate=1):	1.4.
Odor:	Alcohol odor.
Appearance:	Water-white, very thin liquid.
Viscosity:	<1 cSt at 40°C (104°F).
Boiling point:	82°C (180°F).
Pour point:	Melting point is -88°C (-127°F).
Other:	Not applicable.

SECTION 10 STABILITY AND REACTIVITY

Stability:	Material is stable at room temperature and pressure.
Conditions to avoid:	Avoid high temperatures and product contamination.
Incompatibility with other materials:	Avoid contact with acids and oxidizing materials. Avoid aluminum at elevated temperatures.
Decomposition products:	Smoke, carbon monoxide and dioxide, and other aldehydes of incomplete combustion. Oxides of carbon.
Hazardous polymerization:	Will not occur.
Other:	Not determined.

SECTION 11 TOXICOLOGICAL INFORMATION

Oral toxicity:	LD50 for rats - 5.8 g/kg.
Dermal toxicity:	Not determined.
Inhalation toxicity:	Not determined.
Dermal sensitization:	Prolonged or repeated contact may make skin more sensitive to other skin sensitizers. Based on data from similar materials.
Chronic toxicity:	Not determined.
Carcinogenicity:	IARC - Group 3, the product is unclassifiable as to carcinogenicity to humans. OSHA - No. NTP - No.
Mutagenicity:	Negative for rats and rabbits.
Reproductive toxicity:	Negative for rats and rabbits teratogenically. Developmental signs appeared in rats (body weight), negative for rabbits.
Other:	Not applicable.

SECTION 12 ECOLOGICAL INFORMATION

Environmental toxicity:	This material may be toxic to aquatic organisms and should be kept out of sewage and drainage systems and all bodies of water.
Environmental fate:	No data available.
Other:	Not determined.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste disposal:	Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. This product unadulterated by other materials may be classified as an ignitable waste, D001 under RCRA. Waste management should be in full compliance with federal, state, and local laws.
Disposal consideration:	Place used, contaminated, or excess material into disposable containers and dispose of in a manner consistent with local and state regulations. Contact local environmental or health authorities for approved disposal of this material. Licensed incineration is normally required.
Other:	If material is contaminated with a regulated material, the whole of the material becomes a regulated waste. Try to segregate from regulated material waste streams.

SECTION 14 TRANSPORT INFORMATION

U.S. DOT shipping description:	Isopropanol (for bulk transport).
U.S. DOT identification number:	UN1219 (for bulk transport).
U.S. DOT hazard classification:	Flammable.
Packaging class:	II.
Other:	See 49 CFR for additional requirements for descriptions, allowed modes of transport, and packaging. For more information concerning spills during transport, consult latest DOT Emergency Response Guidebook for Hazardous

Materials Incidents, DOT 5800.3.

SECTION 15 REGULATORY INFORMATION

Clean water act/oil pollution act:	Not applicable for this product. However, should a large spill occur contact the National Response Center at 800-424-8802.	
TSCA:	All components of this material are listed in the U.S. TSCA Inventory.	
Other TSCA:	Not applicable.	
SARA Title III:	Section 302/304 extremely hazardous substances: None.	
	Section 311, 312 hazard categorization:	
	Acute (immediate health effects):	YES
	Chronic (delayed health effects):	YES
	Fire (hazard):	YES
	Reactivity (hazard):	NO
	Pressure (sudden release hazard):	NO
	Section 313 toxic chemicals:	Isopropanol 100%.
CERCLA:	For stationary sources – reportable quantity:	Not regulated.
	Due to:	Not applicable.
	For moving sources – reportable quantity:	Not regulated.
	Due to:	Not applicable.
Other:	Recommend contacting the local authorities in the event of any type of spill to determine local reporting requirements and also to aid in the cleanup.	

SECTION 16 OTHER INFORMATION

	NFPA 704	NPCA-HMIS	KEY
HEALTH:	1	1	0 = Minimal
FIRE:	3	3	1 = Slight
REACTIVITY:	0	0	2 = Moderate
SPECIFIC HAZARD:	NONE	N/A	3 = Serious
PROTECTION INDEX:	N/A	B	4 = Severe

Precautionary labels:
- FLAMMABLE
- CAUSES EYE IRRITATION
- MAY CAUSE SKIN IRRITATION
- VAPORS MAY CAUSE RESPIRATORY IRRITATION
- HARMFUL IF SWALLOWED

This product may be formulated in part with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used. Polaris must rely upon information provided by those materials manufacturers or distributors.

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Change in MSDS format.
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