Safety Data Sheet
Prist® HI-FLASH® LO-FLO™ Anti-Icing Aviation Fuel Additive

Version 1.6 Revision Date: 09/01/2019

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Prist® HI-FLASH® LO-FLO™ Anti-Icing Aviation Fuel Additive

Recommended use of the chemical and restrictions on use

Recommended use : DEICER
Fuels and fuel additives

Manufacturer or supplier's details

Company : PRIST®
Address 3075 Highland Pkwy Suite 200
Downers Grove, IL 60515
United States of America (USA)

Emergency telephone number:

PRIST®:-CHEMTREC INTERNATIONAL Tel # 703-527-3887

Additional Information: : Phone: 1-855-429-2661
Regulatory Information Number: 1-855-429-2661
Email: SDSNA@univarsolutions.com

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Gases under pressure : Compressed gas

Reproductive toxicity : Category 2

Specific target organ toxicity - single exposure : Category 3 (Central nervous system)

Simple Asphyxiant :

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : H280 Contains gas under pressure; may explode if heated.
H336 May cause drowsiness or dizziness.
H361 Suspected of damaging fertility or the unborn child.
May displace oxygen and cause rapid suffocation.

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P410 + P403 Protect from sunlight. Store in a well-ventilated place.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Hazardous components

CAS-No.	Chemical name	Weight percent
111-77-3	Glycol Ether DM	90 - 100
124-38-9	Carbon Dioxide	1 - 5

Any Concentration shown as a range is due to batch variation.

Molecular formula : CH3 O (CH2CH2O)2H
Synonyms : PRIST FA LO FLO P/N 84134,

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : Consult a physician after significant exposure.
If unconscious, place in recovery position and seek medical advice.

In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.

In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Do not induce vomiting without medical advice.
Keep respiratory tract clear.

Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during fire-fighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	Carbon oxides
Specific extinguishing methods	:	Use a water spray to cool fully closed containers.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments.
Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Do not spray on a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.

Advice on safe handling	:	Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.
Conditions for safe storage	:	BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects. No smoking. Keep container tightly closed in a dry and well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards. Do not transfer to unmarked containers. Store in closed containers away from heat, sparks, open flame, or oxidizing materials. This product is not classified as hazardous under D.O.T. regulations. Fire extinguishers should be kept readily available. See NFPA 30 and OSHA 1910.106--flammable and combustible liquids.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

CAS-No.	Components	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
124-38-9	Carbon Dioxide	TWA	5,000 ppm	ACGIH
		STEL	30,000 ppm	ACGIH
		TWA	5,000 ppm 9,000 mg/m3	NIOSH REL
		ST	30,000 ppm 54,000 mg/m3	NIOSH REL
		TWA	5,000 ppm 9,000 mg/m3	OSHA Z-1
		TWA	10,000 ppm 18,000 mg/m3	OSHA P0
		STEL	30,000 ppm 54,000 mg/m3	OSHA P0

Personal protective equipment

Respiratory protection	:	General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and

use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Remarks	:	The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Eye protection	:	Eye wash bottle with pure water Tightly fitting safety goggles
Skin and body protection	:	Impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hygiene measures	:	When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Aerosol containing a compressed gas
Colour	:	Clear, Colorless
Odour	:	mild, aromatic
Odour Threshold	:	No data available
pH	:	No data available
Freezing Point (Melting point/freezing point)	:	-84 - -65 °C (-119 - -85 °F)
Boiling Point (Boiling point/boiling range)	:	193 - 194 °C (379 - 381 °F) (1013 hPa)
Flash point	:	83.9 - 91 °C (183.0 - 196 °F) (1,013 hPa) Method: closed cup
Evaporation rate	:	0.02 (Butyl Acetate = 1)
Flammability (solid, gas)	:	No data available
Upper explosion limit	:	22.7 %(V)
Lower explosion limit	:	1.38 %(V)
Vapour pressure	:	0.19 - 0.25 mmHg @ 20 - 25 °C (68 - 77 °F)
Relative vapour density	:	4.2(Air = 1.0)
Relative density	:	1.020 - 1.025 @ 20 °C (68 °F) Reference substance: (water = 1)
Density	:	1.022 - 1.025 g/cm3 @ 20 °C (68 °F)

Solubility(ies)		
Water solubility	:	completely soluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	log Pow: -0.47 - -0.46 @ 20 °C (68 °F)
Auto-ignition temperature	:	215 °C
Thermal decomposition	:	No data available
Viscosity		
Viscosity, dynamic	:	3.9 mPa.s @ 20 °C (68 °F)
Viscosity, kinematic	:	3.82 - 3.89 mm2/s @ 20 °C (68 °F)

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No hazards to be specially mentioned.
Conditions to avoid	:	Keep away from heat, flame, sparks and other ignition sources.
Incompatible materials	:	Strong acids Strong bases Strong oxidizing agents
Hazardous decomposition products	:	Aldehydes Carbon oxides Ketones Organic acids

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Components:

124-38-9:

Acute oral toxicity	:	Remarks: presumed non-toxic
Acute inhalation toxicity	:	Remarks: presumed non-toxic
Acute dermal toxicity	:	Remarks: presumed non-toxic

Skin corrosion/irritation

Product:

Result: No skin irritation

Components:

124-38-9:
Result: presumed non-toxic

Serious eye damage/eye irritation

Product:
Result: No eye irritation

Components:
124-38-9:
Result: presumed non-toxic

Respiratory or skin sensitisation

Components:
124-38-9:
Remarks: No data available

Germ cell mutagenicity

Components:
124-38-9:
Germ cell mutagenicity - Assessment : mutagenicity classification is not possible

Carcinogenicity

Components:
124-38-9:
Carcinogenicity - Assessment : carcinogenicity classification is not possible

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Components:
111-77-3:
Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Oral
Duration of Single Treatment: 10 d
Teratogenicity: LOAEL: 720 mg/kg body weight

		Symptoms: Skeletal malformations
Reproductive toxicity - Assessment		Some evidence of adverse effects on sexual function and fertility, based on animal experiments.
Teratogenicity - Assessment	:	Some evidence of adverse effects on development, based on animal experiments.

124-38-9:

Reproductive toxicity - Assessment		reproduction classification is not possible
Teratogenicity - Assessment	:	teratogenicity classification is not possible

STOT - single exposure

Product:

Target Organs: Central nervous system
Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

Aspiration toxicity

Product:

No aspiration toxicity classification

Further information

Product:

Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
Concentrations substantially above the TLV value may cause narcotic effects.
Solvents may degrease the skin.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

124-38-9:

Toxicity to fish	:	Remarks: presumed non-toxic
Toxicity to daphnia and other aquatic invertebrates	:	Remarks: presumed non-toxic
Toxicity to algae	:	Remarks: presumed non-toxic

Persistence and degradability

Components:

124-38-9:
Biodegradability : Remarks: No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

Product:

Ozone-Depletion Potential	:	Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Additional ecological information	:	No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Dispose of in accordance with all applicable local, state and federal regulations. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Univar Solutions ChemCare: 1-800-909-4897
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

DOT (Department of Transportation):
UN1950, AEROSOLS, 2.2,

IATA (International Air Transport Association):
UN1950, Aerosols, non-flammable, 2.2

IMDG (International Maritime Dangerous Goods):
UN1950, AEROSOLS, 2.2, Flash Point:83.9 - 91 °C(183.0 - 196 °F)

SECTION 15. REGULATORY INFORMATION

WHMIS Classification : A: Compressed Gas
D2A: Very Toxic Material Causing Other Toxic Effects

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Gases under pressure
Simple Asphyxiant
Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

111-77-3	Glycol Ether DM

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

111-77-3	Glycol Ether DM

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

Massachusetts Right To Know

111-77-3	Glycol Ether DM
124-38-9	Carbon Dioxide

Pennsylvania Right To Know

111-77-3	Glycol Ether DM
124-38-9	Carbon Dioxide
109-86-4	Ethanol, 2-methoxy-

110-80-5	2-ethoxyethanol
67-56-1	Methanol

California Prop 65

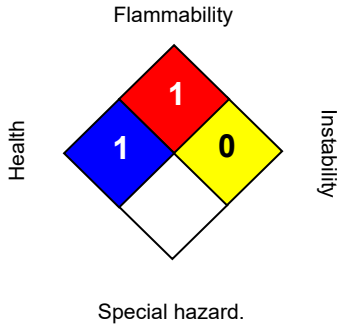
⚠ **WARNING**: This product can expose you to chemicals including Ethanol, 2-methoxy-, 2-ethoxyethanol, Methanol, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

The components of this product are reported in the following inventories:

DSL	:	All components of this product are on the Canadian DSL
TSCA	:	On TSCA Inventory
AICS	:	On the inventory, or in compliance with the inventory
NZIoC	:	On the inventory, or in compliance with the inventory
ENCS	:	On the inventory, or in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory

SECTION16. OTHER INFORMATION

NFPA:



HMIS III:

HEALTH	1*
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 =Extreme, * = Chronic

The information accumulated is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made become available subsequently to the date hereof, we do not assume any responsibility for the results of its use. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Univar Solutions Product Compliance Department (1-855-429-2661)

SDSNA@univarsolutions.com.

Revision Date : 09/01/2019

Material number:
16130728, 16056155

Key or legend to abbreviations and acronyms used in the safety data sheet			
ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philippines Inventory of Commercial Chemical Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical Substances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50	Lethal Concentration 50%		