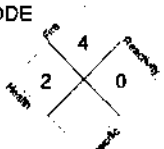


Any questions, please call: First Brands Corporation 83 Wooster Heights Road Building 301 Danbury, CT 06813-1911 Telephone: (203) 731-2300	EMERGENCY TELEPHONE (24 Hours) CHEMTREC (800) 424-9300 483-7616 in District of Columbia	NFPA HAZARD CODE 4 = Extreme 3 = High 2 = Moderate 1 = Slight 0 = Insignificant 
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I. IDENTIFICATION

PRODUCT NAME	PRESTONE® Spray <u>D</u> e-Icer
TYPE	Pressurized Windshield De-Icer
STOCK	AS242
SPEC	PS7242
FORMULA	11309-29B

II. PHYSICAL DATA

BOILING POINT, 760 mm Hg	158°F
FREEZING POINT	greater than -100°F
DENSITY (at 68°F)	7.14 lbs/gal
VAPOR DENSITY (Air = 1)	greater than 1
VAPOR PRESSURE (at 68°F)	47 mm Hg
AEROSOL CONTAINER PRESSURE (at 70°F)	90
VOLATILES BY VOLUME	100%
SOLUBILITY IN WATER, by Wgt.	100%
EVAPORATION RATE (Butyl Acetate = 1)	6
APPEARANCE AND ODOR	clear colorless liquid, alcohol odor

III. HAZARDOUS INGREDIENTS

MATERIAL	%	CAS #	PEL/TLV (UNITS)	(SOURCE)
Ethylene glycol		107-21-1	none established 50 ppm C (vapor)	OSHA ACGIH
Methanol		67-56-1	200 ppm (TWA) 200 ppm skin (TWA)	OSHA ACGIH
Propylene glycol		57-55-6	none established	OSHA /ACGIH
Carbon Dioxide		124-38-9	5000 ppm (TWA) 30,000 ppm (STEL)	OSHA /ACGIH ACGIH

NON-HAZARDOUS INGREDIENTS > 1%

Water	7732-18-15
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None of the ingredients in this product are listed as a carcinogen (or suspected carcinogen) by IARC, NTP or OSHA.

IV. FIRE AND EXPLOSION HAZARD DATA**FLASH POINT**

Tag Open Cup: 69°F(21°C)
Pensky-Martens Closed Cup: 58°F(14°C)

CSMA AEROSOL FLAME EXTENSION

Greater than 24 inches

FLAMMABLE LIMITS IN AIR, % BY VOLUME

LOWER: Not Determined
UPPER: Not Determined

AUTOIGNITION TEMPERATURE

Not Determined

EXTINGUISHING MEDIA

Foam, alcohol foam, carbon dioxide or dry chemical for small fire. Water fog for large fire.

SPECIAL FIRE FIGHTING PROCEDURES

None

UNUSUAL FIRE AND EXPLOSION HAZARDS

Do not incinerate aerosol container or store container in area above 120°F(49°C). Cans of packaged product may rupture if exposed to heat.

V. HEALTH HAZARD DATA**EFFECTS OF SINGLE OVEREXPOSURE****SWALLOWING**

Contains methanol and ethylene glycol. Methanol may cause nausea, abdominal pain, vomiting, shortness of breath, fatigue and leg cramps. Nervous system effects include: headache, confusion, drunken behavior, central nervous system depression, coma and death. Visual effects from methanol include blurred vision, double vision, changes in color perception, restriction of visual fields and complete blindness. With massive overdoses, liver, kidney and heart muscle injury have been described. There may be a delay of several hours between swallowing methanol and the onset of signs and symptoms. Ingestion of moderate quantities of methanol also produces metabolic acidosis. Onset of symptoms may be delayed up to 48 hours. 60-200 ml. is a fatal dose for most adults. Ingestion of as little as 10 ml. may cause blindness. Ethylene glycol, in addition to sharing many of the gastrointestinal and nervous system effects of methanol, also causes metabolic acidosis. In addition, severe kidney damage and possible kidney failure follows the swallowing of large volumes of ethylene glycol. Cardiac failure and pulmonary edema may develop.

SKIN ABSORPTION

Prolonged and widespread contact with skin may result in the absorption of harmful amounts of methanol.

INHALATION

Methanol may cause dizziness, drowsiness, disturbance of vision, and tingling, numbness and shooting pains in the hands and forearms. Ethylene glycol may cause irritation of the nose and throat with headache, particularly from mists. High vapor concentration caused, for example, by heating the material in an enclosed and poorly ventilated workplace, may produce nausea, vomiting, headache, dizziness and irregular eye movements.

SKIN CONTACT

Prolonged contact with the skin to methanol may cause reddening and defatting of the skin.

EYE CONTACT

May cause discomfort with mild redness and swelling of the conjunctiva and possible temporary superficial injury of the cornea.

EFFECTS OF REPEATED OVEREXPOSURE

Long term repeated overexposure to methanol vapor concentrations of 3000 ppm or greater may allow a cumulative effect to occur with resulting nausea, vomiting, headache, ringing in the ears, insomnia, trembling, unsteady gait, vertigo, clouded and double vision. Liver and/or kidney injury may occur. Prolonged overexposure at levels of 800-1000 ppm may result in severe eye damage in some people. Inhalation of ethylene glycol mist may produce signs of central nervous system involvement, particularly dizziness and nystagmus.

OTHER EFFECTS OF OVEREXPOSURE

Repeated skin contact with this product may, in a very small proportion of cases, cause sensitization with the development of allergic contact dermatitis.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE

Due to its defatting properties, methanol may aggravate an existing skin condition, e.g., eczema. Due to its liver and kidney injuring potential, the product may exacerbate existing liver and/or kidney diseases.

SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH HAZARDS

Animal studies suggest that ethylene glycol at high doses is to be regarded as an animal teratogen. The major route for producing developmental toxicity is perorally. Exposure to high aerosol concentrations is only minimally effective in producing developmental toxicity. Cutaneous application is ineffective in producing developmental toxicity. There is currently no available information to suggest that ethylene glycol has caused birth defects in humans.

EMERGENCY AND FIRST AID PROCEDURES**SWALLOWING**

Give two glasses of water and induce vomiting immediately. Never give anything by mouth to an unconscious person. Get medical help urgently by calling a physician, emergency room or poison control center. Ethanol (whiskey, brandy, etc.) is an effective antidote. Medical personnel may instruct you to administer ethanol to the patient depending on the number of variables such as the amount of product swallowed, time elapsed since ingestion and time needed to get patient to an emergency medical facility. (See Notes to Physician below). Take patient and container to nearest emergency medical facility.

SKIN

Remove contaminated clothing. Immediately wash all affected and exposed areas with soap and copious amounts of water. If irritation or redness develops and persists, seek medical attention.

INHALATION

If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped, and seek immediate medical attention.

EYES

Exposed eyes should be immediately flushed with copious amounts of clean water, using a steady stream for a minimum of 15 minutes. If irritation, pain, swelling or tearing persist, seek medical attention.

NOTES TO PHYSICIAN

The combination of visual disturbances, metabolic acidoses and formic acid in the urine is evidence of methanol poisoning. The principal toxic effects of Ethylene glycol when swallowed, are kidney damage and metabolic acidosis.

Ethanol is antidotal, and its early administration may block the formation of toxic metabolites of both methanol and ethylene glycol. The objective is to rapidly achieve and maintain a blood ethanol level of 100 mg/Dl by giving a loading dose of ethanol followed by a maintenance dose. Intravenous administration is the preferred route. The suggested loading dose is approximately 0.8 g/kg of 100% ethanol which is the equivalent of 7.6 to 10 ml/kg of 10% ethanol IV in D5W or 0.8 to 1.0 ml/kg orally of 95% ethanol. The suggested maintenance dose is approximately 110 mg/kg/hr of 100% ethanol which is equivalent to 1.4 ml/kg/hr of IV 10% ethanol or 0.15 ml/kg/hr orally of 95% ethanol. Ethanol blood levels should be checked frequently.

Hemodialysis is highly effective at removing methanol, ethylene glycol and their metabolites, and may be indicated depending on the clinical situation and methanol and/or ethylene glycol blood levels. Adjustment in the ethanol infusion rate will need to be made during hemodialysis. Systemic acidoses can be treated with IV sodium bicarbonate solution.

Additional therapeutic modalities which may decrease the adverse consequences of metabolism are administration of thiamine and pyridoxine for ethylene glycol and folates for methanol poisoning. 4-Methylpyrazole, a potent inhibitor of alcohol dehydrogenase, has been suggested as an antidote for both ethylene glycol and methanol. It is currently being used clinically in some European countries, but is not yet available for general clinical use in America.

VI. REACTIVITY DATA

- STABILITY** Stable.
- HAZARDOUS POLYMERIZATION**
Will not occur.
- CONDITIONS TO AVOID** Heat, sparks and open flames.
- INCOMPATIBILITY (Materials to Avoid)**
Normally none.
- HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS**
Burning may produce CO or CO₂

VII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Wear appropriate personal protective equipment and remove all sources of ignition. Collect material for disposal in a container suitable for flammable waste.

WASTE DISPOSAL METHOD

Waste material is a RCRA hazardous waste due to ignitability. Incineration or landfilling should be carried out in accordance with applicable RCRA federal, state and local regulations.

VIII. SPECIAL PROTECTION INFORMATION

(for manufacturing and bulk spill cleanup)

RESPIRATORY PROTECTION

For operations where the TLV may be exceeded, a NIOSH/MSHA approved supplied air respirator is recommended. Odor is not a reliable indicator of overexposure, so air-purifying equipment is not recommended. Equipment selection depends on contaminant type and concentration, select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

VENTILATION

General ventilation should be adequate for normal use. For operations where the TLV may be exceeded, forced ventilation such as local exhaust may be needed to maintain exposure levels below applicable limits.

PROTECTIVE GLOVES Chemical resistant, such as nitrile or butyl rubber gloves recommended where needed to prevent prolonged/repeated skin contact.

EYE PROTECTION Splash-proof goggles recommended.

OTHER PROTECTIVE EQUIPMENT Protective clothing if needed to avoid prolonged/repeated skin contact. Suitable washing and eye flushing facilities should be available in the work area. Contaminated clothing should be removed and laundered before re-use.

IX. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

- **DANGER:** Flammable.
- May be fatal or cause blindness if swallowed.
- Do not swallow.
- Do not breathe vapors. Use only with adequate ventilation.
- Avoid contact with eyes, skin and clothing.
- Wash exposed skin with soap and water.
- Keep away from sources of heat, sparks, flame and out of direct sunlight.
- Do not expose to temperatures above 120°F.

OTHER PRECAUTIONS

Observe all requirements of plant, company or government regulations.

KEEP OUT OF REACH OF CHILDREN.

X. DEPARTMENT OF TRANSPORTATION

HAZARDOUS MATERIALS	Consumer Commodity
HAZARD CLASSIFICATION	ORM-D
IDENTIFICATION NUMBER	None
LABEL(S) REQUIRED	None

XI. ENVIRONMENTAL DATA**EMERGENCY PLANNING AND COMMUNITY RIGHT TO KNOW INFORMATION**

This product contains the following chemicals subject to SARA TITLE III, Section 313 reporting:

Chemical Name	CAS#	Weight %
Methanol	67-56-1	70-80
Ethylene Glycol	107-21-1	5-9

This MSDS is directed to professional users and bulk handlers of the product. Consumer products are labeled in accordance with Federal Hazardous Substances Act regulations.

While First Brands Corporation believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which First Brands Corporation assumes legal responsibility. They are offered solely for your consideration, investigation and verification. Any use of these data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

If more information is needed, please contact:

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