

MATERIAL SAFETY DATA SHEET

Effective Date: 1-24-91 Revision Date: 7-19-00

Prestone(R) De-Icer AS242

Code: PPC

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Section 1 - Product and Company Identification

PRODUCT NAME: Prestone(R) De-Icer AS242

MANUFACTURER'S NAME:
Prestone Products Corporation
39 Old Ridgebury Road
Danbury, CT 06810-5109

EMERGENCY TELEPHONE NUMBER
(203)830-7865

MISCELLANEOUS INFORMATION

Section 2 - Hazardous Ingredients

MATERIAL	%	CAS #	EXPOSURE LIMITS	SOURCE
Ethylene glycol	5-9	107-21-1	none established 50 ppm C (vapor)	OSHA ACGIH
Methanol	70-80	67-56-1	200 ppm (TWA) 200 ppm skin (TWA)	OSHA ACGIH
Propylene glycol	5-9	57-55-6	none established	OSHA /ACGIH
Carbon Dioxide	105	124-38-9	5000 ppm (TWA) 30,000 ppm (STEL)	OSHA /ACGIH ACGIH

NON-HAZARDOUS INGREDIENTS > 1%

Water 5-9 7732-18-15

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

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Section 3 - Hazards Identification

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

condition, e.g., aczema. 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.

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Section 4 - First Aid Measures

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, ect.) in 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/ by giving a loading dose of ethanol followed by 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 which is equivalent to 104 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

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Section 4 - First Aid Measures - Continued

not yet available for general clinical use in America.

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Section 5 - Firefighting Measures

FLASH POINT: Tag Open Cup: 69 Deg. F(21 Deg. C)

Pensky-Martens Closed Cup: 58 Deg. F (14 Deg. C)

AEROSOL FLAME EXTENSION: Greater than 18 inches

FLASHBACK: None

AEROSOL FIRE PROTECTION LEVEL: Level 2 Aerosol (NFPA 30B)

FLAMMABLE LIMITS IN AIR, % BY VOLUME: LOWER: 3.2 (ETHYLENE GLYCOL)

UPPER: 36 (METHANOL)

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 Deg. F(49 Deg. C). Cans of packaged product may rupture if exposed to heat.

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Section 6 - Environmental Release Measures

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.

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Section 7 - Handling and Storage

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 120F.

OTHER PRECAUTIONS: - Observe all requirements of plant, company or
government regulations.
- Keep out of reach of children

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Section 8 - Exposure Controls/Personal Protection

(for manufacturing and bulk spill cleanup)

RESPIRATORY PROTECTION: For operations where the TLV may be exceeded, a
NIOSH/MSHA approved respirator with an organic vapor cartridge and a
dust/mist prefilter or a supplied air respirator is 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 at
ambient temperatures. For operations where the material is heated or
misted and 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 neoprene or PVC coated,
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.

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Section 9 - Physical and Chemical Properties

BOILING POINT, 760mm Hg : 158 Deg. F
FREEZING POINT : <-100 Deg. F
DENSITY 9at 68 Deg. F) : 7.14 lbs/gal
VAPOR DENSITY (Air = 1) : greater than 1
VAPOR PRESSURE (AT 68 Deg. F) : 47 mm Hg
AEROSOL CONTAINER PRESSURE
(at70 Deg. 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
ph : not determined
VISCOSITY : not determined

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Section 10 - Stability and Reactivity

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.

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Section 11 - Toxicological Information

Not available.

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Section 12 - Ecological Information

Not available.

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Section 13 - Disposal Considerations

WASTE DISPOSAL METHOD: Waste material is a RCRA hazardous waste due to ignitability. Incineration or land filling should be carried out in accordance with applicable RCRA federal, state, and local regulations.

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Section 14 - Transport Information

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

DOT Marine Pollutants: This product does not contain marine pollutants as defined in 49 CFR 171.8.

IMDG Code Shipping Classification

Description: Aerosol Product, Class 9, UN1950, FP 14 C, IMDG Page 9022
ID Number : UN1950
Hazard Class : 9
Packing Group : None
Labels Required : None
Placards Required: Class 9 if FULL CONTAINER of this product

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Section 15 - Regulatory Information

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

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Section 16 - Other Information

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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