



Material Safety Data Sheet

The Valvoline Company

Date Prepared: 04/07/99

Date Printed: 10/18/99

MSDS No: 503.0177148-

008.002I

MAC'S WINDSHIELD DE-ICER 7000

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity

Product Name: MAC'S WINDSHIELD DE-ICER 7000

General or Generic ID: SOLVENT BLEND

Company

Telephone Numbers

The Valvoline Company

Emergency: 1-800-274-5263

P.O. Box 14000

Lexington, KY 40512

Information: 1-606-357-7847

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s) weight)	CAS Number	% (by weight)
METHYL ALCOHOL	67-56-1	62.0
ETHYLENE GLYCOL	107-21-1	6.0
CARBON DIOXIDE	124-38-9	0.0-

8.0

3. HAZARDS IDENTIFICATION

Potential Health Effects

Eye

Can cause eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes.

Skin

May cause mild skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, drying and cracking of skin, and skin burns. Although rare, skin contact with ethylene glycol may cause allergic skin reaction (delayed skin rash which may be followed by blistering, scaling and other skin effects). Passage of this material into the body through the skin is possible, and may add to toxic effects from breathing or swallowing.

Swallowing

Swallowing this material may be harmful.

Inhalation

Breathing of vapor or mist is possible. Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful.

Symptoms of Exposure

stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), central nervous system excitation (giddiness, liveliness, light-headed feeling) followed by central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness) and other

central nervous system effects, involuntary eye movement, visual impairment (including blindness), and death.

Target Organ Effects

Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals, and may aggravate preexisting disorders of these organs in humans: liver abnormalities, spleen damage, nervous system damage, eye damage, lung damage, brain damage, kidney damage.

Developmental Information

Ethylene glycol has caused birth defects in animal studies at high oral doses.

Cancer Information

No data

Other Health Effects

No data

Primary Route(s) of Entry

Inhalation, Skin absorption, Skin contact.

4. FIRST AID MEASURES

Eyes

If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

Skin

Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

Swallowing

Call a physician or poison control center immediately. Ethylene Glycol based.

Inhalation

If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

Note to Physicians

This product contains methanol which can cause intoxication and central nervous system depression. Methanol is metabolized to formic acid and formaldehyde. These metabolites can cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used to prevent methanol metabolism. Ethanol administration is indicated in symptomatic patients or at blood methanol concentrations above 20 ug/dl. Methanol is effectively removed by hemodialysis. This product contains ethylene glycol. Ethanol decreases the metabolism of ethylene glycol to toxic metabolites. Ethanol should be administered as soon as possible in cases of severe poisoning since the elimination half-life of ethylene glycol is 3

hours. If medical care will be delayed several hours, give the patient three to four 1-ounce oral "shots" of 86-proof or higher whiskey before or during transport to the hospital. Hemodialysis effectively removes ethylene glycol and its metabolites from the body.

5. FIRE FIGHTING MEASURES

Flash Point

Not applicable

Explosive Limit

(for component) Lower 3.2 Upper 36.5 %

Autoignition Temperature

No data

Hazardous Products of Combustion

May form: carbon dioxide and carbon monoxide.

Fire and Explosion Hazards

Vapors are heavier than air and may travel along the ground or be moved by ventilation and ignited by heat, pilot lights, other flames and ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

Extinguishing Media

alcohol foam, water fog.

Fire Fighting Instructions

Wear a self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS.

NFPA Rating

Health - 1, Flammability - 3, Reactivity - 0

6. ACCIDENTAL RELEASE MEASURES

Small Spill

Absorb liquid on vermiculite, floor absorbent, or other absorbent material and transfer to hood.

Large Spill

Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up

has

been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal. Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred.

7. HANDLING AND STORAGE

Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

Storage

Not applicable

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection

Not required under normal conditions of use.

Skin Protection

Not required under normal conditions of use., Other protective equipment: not required under normal conditions of use..

Respiratory Protections

Not required under normal conditions of use.

Engineering Controls

Not required under normal conditions of use.

Exposure Guidelines

Component

METHYL ALCOHOL (67-56-1)

OSHA VPEL 200.000 ppm - TWA ((Skin))

OSHA VPEL 250.000 ppm - STEL ((Skin))

ACGIH TLV 200.000 ppm - TWA ((Skin))

ACGIH TLV 250.000 ppm - STEL ((Skin))

ETHYLENE GLYCOL (107-21-1)

OSHA VPEL 50.000 ppm - Ceiling

ACGIH TLV 100.000 mg/m3 - Ceiling as an aerosol

CARBON DIOXIDE (124-38-9)

OSHA VPEL 10000.000 ppm - TWA

OSHA VPEL 30000.000 ppm - STEL

ACGIH TLV 5000.000 ppm - TWA

ACGIH TLV 30000.000 ppm - STEL

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point

(for component) 147.0 F (63.8 C) @ 760 mmHg

Vapor Pressure

(for component) 97.680 mmHg @ 68.00 F

Specific Vapor Density

> 1.000 @ AIR=1

Specific Gravity

.875 - .895 @ 77.00 F

Liquid Density

7.160 lbs/gal @ 77.00 F

.885 kg/l @ 25.00 C

Percent Volatiles (Including Water)

85.0 - 100.0 %

Volatile Organic Compounds (VOC) (Maximum)

606.000 g/l

5.060 lbs/gal

Evaporation Rate

FASTER THAN ETHYL ETHER

Appearance

CLEAR

State

LIQUID

Physical Form

No data

Color

COLORLESS

Odor

No data

pH

Not applicable

Flame Propagation

< 18.000 IN

10. STABILITY AND REACTIVITY

Hazardous Polymerization

Product will not undergo hazardous polymerization.

Hazardous Decomposition

May form: carbon dioxide and carbon monoxide.

Chemical Stability

Stable.

Incompatibility

Avoid contact with: strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION

No data

12. ECOLOGICAL INFORMATION

No data

13. DISPOSAL CONSIDERATION

Waste Management Information

Destroy by liquid incineration. Dispose of in accordance with all applicable local, state and federal regulations.

14. TRANSPORT INFORMATION

DOT Information - 49 CFR 172.101

DOT Description:

AEROSOLS, 2.1, UN 1950

Container/Mode:

CASES/SURFACE - NO EXCEPTIONS

NOS Component:

None

RQ (Reportable Quantity) - 49 CFR 172.101

Product Quantity (lbs) Component

8071 METHANOL

15. REGULATORY INFORMATION

US Federal Regulations

TSCA (Toxic Substances Control Act) Status

TSCA (UNITED STATES) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4

Component

Component

METHYL ALCOHOL 5000
ETHYLENE GLYCOL 5000

SARA 302 Components - 40 CFR 355 Appendix A
None

Section 311/312 Hazard Class - 40 CFR 370.2
Immediate(X) Delayed(X) Fire(X) Reactive() Sudden
Release of Pressure()

SARA 313 Components - 40 CFR 372.65

Section 313 Component(s) CAS Number

METHANOL 67-56-1
ETHYLENE GLYCOL 107-21-1

International Regulations

Inventory Status

Not determined

State and Local Regulations

California Proposition 65

None

New Jersey RTK Label Information

METHYL ALCOHOL 67-56-1
ETHYLENE GLYCOL 107-21-1
CARBON DIOXIDE 124-38-9

Pennsylvania RTK Label Information

METHANOL 67-56-1
1,2-ETHANEDIOL 107-21-1
CARBON DIOXIDE 124-38-9

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.