



MATERIAL SAFETY DATA SHEET

FOR INDUSTRIAL USE ONLY

DESCRIPTION: Borden MO-818-AL

1. Chemical Product and Company Identification

DESCRIPTION: **Borden MO-818-AL**
PRODUCT CODE: 304344
PRODUCT TYPE: Liquid Lubricant
APPLICATION: Additive-Urea Resin-Wood to Wood

Manufacturer/Supplier Information

MSDS prepared by:
Hexion Specialty Chemicals, Inc.
155 West A Street, Bldg. A-1
Springfield, OR
97477

For Emergency Medical Assistance
Call Health & Safety Information Services
1-866-303-6949

For additional health and safety or regulatory information, call (541)744-3256.

2. Composition, Information on Ingredients

The ingredients listed below have been associated with one or more immediate and/or delayed(*) health hazards. Risk of damage and effects depends upon duration and level of exposure. BEFORE USING, HANDLING, OR EXPOSURE TO THESE INGREDIENTS, READ AND UNDERSTAND THE MSDS.

		% by weight
107-21-1	*Ethylene Glycol	30.0 - 50.0
112-80-1	Oleic Acid	5.0 - 10.0
61790-50-9	*Rosin, Potassium Salt	30.0 - 50.0

Any applicable Canadian trade secret numbers will be listed in Section 15.2.

3. Hazards Identification

3.1 Emergency Overview

Appearance	Brown liquid
Odor	Faint pine oil

CAUTION!

Will burn.

May be harmful if inhaled. May cause irritation of nose, throat and lungs.

Can cause central nervous system depression.

Causes eye irritation.

May cause allergic skin reaction.

NORTH AMERICAN EMERGENCY RESPONSE GUIDE, 2000, NO: 171

HMIS Rating

HEALTH = 2 (moderate)
 FLAMMABILITY = 1 (slight)
 REACTIVITY = 0 (minimal)
 CHRONIC = *

3.2 Potential Health Effects

Immediate Hazards

INGESTION: Not expected to be harmful under normal conditions of use.
 INHALATION: May be harmful if inhaled. Liquid or vapor may cause irritation of nose, throat and lungs.
 Can cause central nervous system depression.
 SKIN: May cause irritation on prolonged or repeated contact.
 EYES: Causes irritation.

107-21-1 Ethylene Glycol

Can cause central nervous system depression. Signs and symptoms may include headache, dizziness, nausea, vomiting, unconsciousness and even asphyxiation.
 Ingestion can cause severe, acute kidney damage which may be fatal.

Delayed Hazards

61790-50-9 Rosin, Potassium Salt

May cause allergic skin reaction.
 -- See Footnote

107-21-1 Ethylene Glycol

Suspect reproductive hazard. May cause reproductive disorders based on feeding study with laboratory animals.
 Can cause liver damage.
 Can cause kidney damage.
 -- See Footnote

Footnote: As of the date of issuance of this document, this material has not been listed by NTP, classified by IARC nor regulated by OSHA as a carcinogen.

4. First Aid Measures

INGESTION: If accidentally swallowed, dilute by drinking large quantities of water. If the individual is drowsy or unconscious, do not give anything by mouth. Immediately contact poison control center or hospital emergency room for advice on whether to induce vomiting or for any other additional treatment directions.

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Call a physician.

SKIN: In case of irritation, flush with water.

EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held apart during irrigation to ensure water contact with entire surface of eyes and lids. Call a physician.

5. Fire Fighting Measures

Flash point	Not available
Lower explosion limit	Not available
Upper explosion limit	Not available
Autoignition temperature	Not available

Will burn.

In case of fire, use water spray, dry chemical, foam or CO2. Use water to keep fire-exposed containers cool.

6. Accidental Release Measures

Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. For large spills, use water spray to disperse vapors and flush spill area. Prevent runoff from entering waterways or sewers. Use appropriate Personal Protective Equipment (PPE).

7. Handling and Storage

7.1 Handling

Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of the material from eyes, skin and clothing. Wash thoroughly after handling. Always use appropriate Personal Protective Equipment (PPE).

INHALATION: Avoid breathing vapor. Use with adequate ventilation.

SKIN: Avoid prolonged or repeated contact with skin and clothing.

EYES: Avoid contact with eyes.

7.2 Storage

Keep container closed.

Not harmed by freezing, but thaw frozen resin slowly and stir before using.

Store in a cool, dry place.

8. Exposure Controls/Personal Protection

8.1 Exposure Controls

ENGINEERING CONTROLS: The following exposure control techniques may be used to effectively minimize employee exposure: local exhaust ventilation, enclosed system design, process isolation and remote control in combination with appropriate use of personal protective equipment and prudent work practices. These techniques may not necessarily address all issues pertaining to your operations. We, therefore, recommend that you consult with experts of your choice to determine whether or not your programs are adequate.

If airborne contaminants are generated when the material is heated or handled, sufficient ventilation in volume and air flow patterns should be provided to keep air contaminant concentration levels below acceptable criteria.

8.2 Personal Protection

Where air contaminants can exceed acceptable criteria, use NIOSH (42 CFR Part 84) approved respiratory protection equipment. Respirators should be selected based on the form and concentration of contaminants in air in accordance with OSHA laws and regulations or other applicable standards or guidelines, including ANSI standards regarding respiratory protection. Use goggles if contact is likely. Wear impervious gloves as required to prevent skin contact.

8.3 Exposure Guidelines

107-21-1		Ethylene Glycol		
ACGIH TLV OSHA PEL	Ceiling		100 mg/m3	Aerosol
	None			
	Established			
	Remanded	50 ppm	125 mg/m3	1989 PEL remanded, but in effect in some states
	Ceiling			
112-80-1		Oleic Acid		
ACGIH TLV	None established			
OSHA PEL	None established			
61790-50-9		Rosin, Potassium Salt		
ACGIH TLV	None established			
OSHA PEL	None established			

9. Physical and Chemical Properties

Appearance	Brown liquid
Odor	Faint pine oil
Odor threshold	Not available
Specific gravity	Approx. 1.07
pH	8.6 - 9.4
Freezing point	Not available
Solubility in water	Not available
Octanol/water partition coefficient	Not available
Vapor pressure	Not available
Vapor density	Not available
Evaporation rate	Not available
Boiling point, 760 mm Hg	Not available

10. Stability and Reactivity

Normally stable as defined in NFPA 704-12(4-3.1).

Decomposition products may include:

Oxides of carbon.

Hazardous polymerization:

Will not occur.

11. Toxicological Information

See Section 3 Hazards Identification information.

107-21-1 Ethylene Glycol

LC50: Not available

LD50: Oral-rat= 8,540 mg/kg (Merck)

112-80-1 Oleic Acid

LC50: Not available

LD50: Oral-rat= 74,000 mg/kg (Sax)

61790-50-9 Rosin, Potassium Salt

LC50: Not available

LD50: Not available

12. Ecological Information

Not determined

13. Disposal Considerations

Recover free liquid. Absorb residue and dispose of according to local, state/provincial, and federal requirements.

14. Transport Information

14.1 U.S. Department of Transportation (DOT)

The data provided in this section is for information only and may not be specific to your package size. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Ethylene Glycol)
UN/NA number	3082
Class	9
Packing group	III
Label	9
RQ Ingredients	Ethylene Glycol

14.2 Canadian Transportation of Dangerous Goods (TDG)

Regulation: Non regulated

15. Regulatory Information (Selected Regulations)

15.1 U.S. Federal Regulations

OSHA Hazards Communication Standard 29CFR1910.1200

This material is a "health hazard" and/or a "physical hazard" as determined when reviewed according to the requirements of the Occupational Safety and Health Administration 29 CFR Part 1910.1200 "Hazard Communication" Standard.

SARA Title III: Section 311/312

Immediate health hazard

Delayed health hazard

SARA Title III: Section 313 and 40 CFR Part 372

This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372.

Ethylene Glycol	107-21-1	43.00%
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TSCA Section 8(b) Inventory

All reportable chemical substances are listed on the TSCA Inventory. We rely on certifications of compliance from our suppliers for chemical substances not manufactured by us.

15.2 Canadian Regulations

Workplace Hazardous Materials Information System (WHMIS)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation (CPR) and the MSDS contains all the information required by the CPR.

Class D2B

Canadian Environmental Protection Act (CEPA)

All reportable chemical substances are listed on the Domestic Substances List (DSL) or otherwise comply with CEPA new substance notification requirements.

National Pollutant Release Inventory (NPRI)

This product contains the following chemical(s) subject to the reporting requirements of the Canadian Environmental Protection Act (CEPA) subsection 16(1), National Pollutant Release Inventory.

Ethylene Glycol	107-21-1	43.00%
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16. Other Information

User's Responsibility

The OSHA Hazard Communication Standard 29CFR 1910.1200 and the Workplace Hazardous Materials Information System (WHMIS) require that the information contained on these sheets be made available to your workers. Educate and train your workers regarding OSHA and WHMIS precautions. Instruct your workers to handle this product properly. Consult with appropriate experts to guard against hazards associated with use of this product and its ingredients.

Disclaimer

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