



MATERIAL SAFETY DATA SHEET

1 PRODUCT AND COMPANY IDENTIFICATION

Product Name: ShineM

Synonyms: No information available

Material identifier: 74-451-178, 74-451-203, used in Kit 74-451-Z

Molecular Formula: Not applicable

Molecular Weight: Not applicable

Company:

Goodrich Corporation

Sensors and Integrated Systems (Formerly De-icing and Specialty Systems)

1555 Corporate Woods Parkway

Uniontown, Ohio 44685

Emergency Telephone:

(800)424-9300

Business Telephone:

(330)374-4011

Intended Use: Aerospace Coating

2 HAZARDS IDENTIFICATION

Emergency Overview

Physical State: Liquid

Color: Milky

Odor: Slight

WARNING!

Causes eye irritation.

Potential Health Effects

Inhalation: Not expected to be an inhalation hazard. Exposure may cause respiratory tract irritation, coughing and wheezing.

Eye Contact: Causes eye irritation. Exposure may cause eye tearing, redness and discomfort.

Skin Contact: May cause skin irritation. Exposure may cause rash, redness, itching, and inflammation.

Ingestion: May cause irritation to the digestive system. Exposure may cause irritation, vomiting, and diarrhea.

Chronic Health Effects: Prolonged and repeated exposure to this product may cause adverse kidney, reproductive system and central nervous system effects.

Target Organ(s): Eye, kidney, reproductive system, central nervous system

OSHA Regulatory Status: Hazardous**3 COMPOSITION / INFORMATION ON INGREDIENTS**

Chemical Name	CAS-No.	Weight %
water	7732-18-5	> 45
styrene/acrylic copolymer emulsion	not assigned	< 45
diethylene glycol monoethyl ether	111-90-0	< 3
tri(2-butoxyethyl) phosphate	78-51-3	< 3
polyethylene emulsion	not assigned	< 2

Components not listed are not hazardous or are below reportable limits.

4 FIRST AID MEASURES**Inhalation:** If symptomatic, move to fresh air. Get medical attention if symptoms persist.**Eye Contact:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Get medical attention.**Skin Contact:** In case of contact, wash with soap and water. Get medical attention if symptoms occur.**Ingestion:** If swallowed, get medical attention if symptoms occur.**5 FIRE-FIGHTING MEASURES****Extinguishing Media:** Water spray, dry chemical, carbon dioxide, foam**Unsuitable Extinguishing Media:** Not applicable.**Special Fire Fighting Procedures:** Self contained breathing apparatus and full protective clothing must be worn in case of fire. Use water spray to keep fire-exposed containers cool.**Unusual Fire & Explosion Hazards:** Container may rupture in a fire situation.**Hazardous Combustion Products:** Carbon oxides, oxides of phosphorous, polymeric compounds.**6 ACCIDENTAL RELEASE MEASURES****Personal Precautions:** Wear appropriate personal protective equipment (See Section 8).**Spill Cleanup Methods:** Small Liquid Spills: Wipe up or use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

Large Spillages: Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Flush area with water spray. Prevent entry into waterways, sewer, basements or confined areas.

7 HANDLING AND STORAGE

Handling: Personal Precautionary Measures: Wear appropriate personal protective equipment. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

Prevention of Fire and Explosion: Keep away from strong oxidizing agents.

Special Handling Instructions: In addition to any precautions listed, consult occupational safety and health specialist to ensure that the suggested procedures will be adequate and in compliance with applicable laws and regulations.

Storage: Keep container closed. Keep from freezing.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

Chemical Name	Source	Type	Exposure Limits	Notes
Diethylene glycol monoethyl ether	AIHA	WEELs	25 ppm 140 mg/m3	--

Engineering Controls: Depending on use, process enclosures, local exhaust ventilation, or other engineering controls may be required to keep airborne contaminants below established exposure limits.

Respiratory Protection: If engineering controls do not keep airborne concentrations below established exposure limits, follow NIOSH guidelines in determining appropriate respirator protection.

Eye Protection: Wear safety glasses with side shields (or goggles).

Hand Protection: Wear chemical-resistant gloves (e.g. nitrile or latex).

Skin Protection: Wear flame resistant coveralls, lab coat, or apron to prevent skin contact.

Hygiene Measures: Always wash hands thoroughly with soap and water after handling material.

9 PHYSICAL AND CHEMICAL PROPERTIES

Color: Milky

Odor: Slight

Physical State: Liquid

Odor Threshold: No data available

pH: No data available

Boiling Point: No data available

Melting Point: No data available

Softening Point: No data available

Flash Point: > 93°C (> 200°F) (estimated)

Evaporation Rate: No data available

Flammability Limit – Upper (vol %): No data available

Flammability Limit – Lower (vol %): No data available

Vapor Pressure: No data available

Vapor Density (Air=1): No data available

Specific Gravity: 1.019

Density: 8.501 lb/gal
Solubility in Water: Soluble
Partition Coefficient (n-Octanol/water): No data available
Autoignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available
Volatiles: No data available

10 STABILITY AND REACTIVITY

Stability: Stable under recommended handling and storage conditions.

Conditions to Avoid: Elevated temperatures

Incompatible Materials: Strong oxidizing agents

Hazardous Decomposition Products: Carbon oxides, oxides of phosphorous, polymeric compounds.

Hazardous Polymerizations: Will not occur.

11 TOXICOLOGICAL INFORMATION

Specified Substances

Acute Toxicity:

Chemical Name	Test Results
Diethylene glycol monoethyl ether	Oral LD50 (Rat): 7500 mg/kg
Diethylene glycol monoethyl ether	Inhalation LC50 (Rat): >5240 mg/m ³ /4H
Diethylene glycol monoethyl ether	Dermal LD50 (Guinea pig): >32000 mg/kg
Diethylene glycol monoethyl ether	Eye (rabbit): 500 mg, moderate irritation
Diethylene glycol monoethyl ether	Skin (rabbit): 500 mg/24H, mild irritation
Tri(2-butoxyethyl) phosphate	Oral LD50 (Rat): 3000 mg/kg
Tri(2-butoxyethyl) phosphate	Dermal LD50 (Rabbit): >16 mL/kg
Tri(2-butoxyethyl) phosphate	Inhalation Lethal Concentration (Rat): >600 mg/m ³ /6H
Tri(2-butoxyethyl) phosphate	Eye (rabbit): 500 mg/24H, mild irritation
Tri(2-butoxyethyl) phosphate	Skin (rabbit): 500 mg/24H, mild irritation

Chronic Toxicity: Prolonged and repeated exposure to this product may cause adverse kidney, reproductive system and central nervous system effects.

Listed Carcinogens: None

12 ECOLOGICAL INFORMATION

Acute Toxicity: No data available.

Degradability: No data available.

Bioaccumulation: No data available.

13 DISPOSAL CONSIDERATIONS

General Information: Dispose in accordance with applicable federal, state, and local regulations. Incinerate.

Disposal Methods: No specific disposal method required.

Container: Empty containers of this material may contain residual liquid, vapors or dust. Precautions previously cited should be observed with such containers. Follow label warnings even after container is emptied

14 TRANSPORT INFORMATION

DOT: Not regulated

TDG: Not regulated

IATA: Not regulated

IMDG: Not regulated

15 REGULATORY INFORMATION

Canadian Controlled Products Regulations: This product has been classified according to the hazard criteria of the Canadian Controlled Products Regulations, Section 33, and the MSDS contains all required information.

WHMIS Classification: D2B

Inventory Status

This product or all components are listed on the following inventory: TSCA

One or more components are not listed on the following inventory: DSL

US Regulations

CERCLA Hazardous Substance List (40 CFR 302.4):

Component	Reportable Quantity
Glycol ethers	--

SARA Title III (Emergency Planning & Community Right-to-Know Act (EPCRA))

Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A): None

Section 311/312 (40 CFR 370):

☒ Acute (Immediate) ☐ Chronic (Delayed) ☐ Fire ☐ Reactive ☐ Pressure Generating

Section 313 Toxic Release Inventory (40 CFR 372):

Component	CAS No.	Concentration
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Diethylene glycol monoethyl ether (as certain glycol ethers)	111-90-0	< 3%
Tri(2-butoxyethyl) phosphate (as certain glycol ethers)	78-51-3	< 3%

Clean Air Act (CAA) Section 112, 1990 Amendments, Statutory Hazardous Air Pollutants: Glycol ethers, excluding ethylene glycol monobutyl ether

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130): None

Clean Water Act Section 307 Toxic Pollutants (40 CFR 401.15): None

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3): None

Drug Enforcement Act:

Drug Enforcement Administration (21 CFR 1310.02(b) and 1310.04 (f)(2)): None

Drug Enforcement Administration (21 CFR 1310.12(c)): None

TSCA:

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) (revised, effective January 16, 2007): None

ITAR, US Munitions List, Category V, Explosives & Energetic Materials, Propellants, Incendiary Agents and their Constituents (22 CFR 121): None

Homeland Security:

ATF List of Explosive Materials (27 CFR 555.23 as amended): None

State Regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): None

Massachusetts Right-To-Know List: None

Michigan Critical Materials List (Michigan Natural Resources and Environmental Protection Act (Act. 451 of 1994)): None

Minnesota Hazardous Substances List: Diethylene glycol monoethyl ether

New Jersey Right-To-Know List: Glycol ethers

Pennsylvania Right-To-Know List: Glycol ethers

Rhode Island Right-To-Know List: None

16	OTHER INFORMATION
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Hazard Ratings

	Health Hazard	Fire Hazard	Reactivity Hazard	Special Hazard
NFPA	2	1	0	--

	Health Hazard	Fire Hazard	Reactivity Hazard
HMIS	2*	1	0

0 Minimal; 1 Slight; 2 Moderate; 3 Serious; 4 Severe; * Chronic health effect

Revision Information: New SDS format, Section 16

Supersedes Date: 08/19/2009

Prepared by: Ariel Authoring Services a 3E Company

Issue Date: 09/13/2012

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