MATERIAL SAFETY DATA SHEET

1 PRODUCT AND COMPANY IDENTIFICATION

Product Name: LA 5102
Synonyms: Goodrich Kit 74-451-P
Material identifier: 74-451-220
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:

2 HAZARDS IDENTIFICATION

Emergency Overview

Physical State: Liquid
Color: Clear to hazy
Odor: Characteristic, solvent

DANGER!
Extremely flammable liquid and vapor – vapor may cause flash fire.
Causes eye and skin irritation.
Mist or vapor irritating to the eyes and respiratory tract.
High vapor concentrations may cause central nervous system effects.

Potential Health Effects

Inhalation: Mist or vapor irritating to the respiratory system. High vapor concentrations may cause drowsiness and irritation of the respiratory tract. Symptoms may include coughing, asthmatic breathing, headache and drowsiness.

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

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

Ingestion: May cause irritation to the digestive system. Symptoms include irritation, vomiting, and diarrhea.

Chronic Health Effects: Repeated exposure may damage liver, kidneys, and central nervous system.

Target Organ(s): Eye, skin, central nervous system, liver, kidney, respiratory system

OSHA Regulatory Status: Hazardous

3 COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Weight %
Acetone	67-64-1	52
Methyl ethyl ketone	78-93-3	23
Tetrahydrofuran	109-99-9	10
Trade secret components	proprietary	proprietary

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

4 FIRST AID MEASURES

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

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 plenty of water for 15 minutes. Get medical attention.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. If vomiting occurs, keep head lower than the hips to help prevent aspiration. Never give anything by mouth to an unconscious person. Get medical attention.

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.

Unusual Fire & Explosion Hazards: Use water with caution. Material will float and may ignite on the surface of water. Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting fire. Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent build-up of vapors or gasses to explosive concentrations.

Hazardous Combustion Products: Carbon oxides, nitrogen oxides, sulfur oxides, hydrogen sulfide

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate personal protective equipment. See Section 8.

Spill Cleanup Methods: Small Liquid Spills: 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. Use water spray to reduce mist/vapors or divert vapor cloud drift. Prevent entry into waterways, sewer, basements or confined areas.

7 HANDLING AND STORAGE

Handling: Personal Precautionary Measures: Wear appropriate personal protective equipment. Do not breathe mist or vapor. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wash thoroughly after handling. Keep out of the reach of children.

Prevention of Fire and Explosion: Keep away from ignition sources. 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 tightly closed and in a cool, well-ventilated place.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

Chemical Name	Source	Type	Exposure Limits	Notes
Acetone	ACGIH	TWA	500 ppm	URT and eye irritant, CNS impair, hematologic effect
Acetone	NIOSH	IDLH	2500 ppm	--
Acetone	OSHA	TWA	1000 ppm	--
Acetone	OSHA	TWA	2400 mg/m^3	--
Acetone	Cal OSHA	TWA	500 ppm	--
Acetone	Cal OSHA	TWA	1200 mg/m^3	--
Methyl ethyl ketone	ACGIH	TWA	200 ppm	URT irritant, CNS & PNS impair
2-Butanone	NIOSH	IDLH	3000 ppm	--
2-Butanone	OSHA	TWA	200 ppm	--
2-Butanone	OSHA	TWA	590 mg/m^3	--
2-Butanone	Cal OSHA	TWA	200 ppm	--
2-Butanone	Cal OSHA	TWA	590 mg/m^3	--
Tetrahydrofuran	ACGIH	TWA	50 ppm	URT irritant, CNS impair,

				kidney damage
Tetrahydrofuran	NIOSH	IDLH	2000 ppm	--
Tetrahydrofuran	OSHA	TWA	200 ppm	--
Tetrahydrofuran	OSHA	TWA	590 mg/m^3	--
Tetrahydrofuran	Cal OSHA	TWA	200 ppm	--
Tetrahydrofuran	Cal OSHA	TWA	590 mg/m^3	--

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: Clear to hazy
Odor: Characteristic, solvent
Physical State: Liquid
Odor Threshold: No data available
pH: Not applicable
Boiling Point: 56°C (133°F) (Acetone)
Melting Point: No data available
Softening Point: No data available
Flash Point: - 20°C (- 4°F) (Acetone)
Evaporation Rate: No data available
Flammability Limit – Upper (vol %): 12.8
Flammability Limit – Lower (vol %): 1.8
Vapor Pressure: 174 mmHg @ 20°C (68°F)
Vapor Density (Air=1): 2.2
Specific Gravity: 0.848
Solubility in Water: Negligible
Partition Coefficient (n-Octanol/water): No data available
Autoignition Temperature: 610°C (321°F) (Tetrahydrofuran)
Decomposition Temperature: No data available
Viscosity: No data available
Volatiles: 0.717 kg/L

10 STABILITY AND REACTIVITY

Stability: Stable

Conditions to Avoid: Excessive heat

Incompatible Materials: Strong oxidizers

Hazardous Decomposition Products : Carbon oxides, nitrogen oxides, sulfur oxides, hydrogen sulfide

Hazardous Polymerizations: Will not occur.

11 TOXICOLOGICAL INFORMATION

Specified Substances

Acute Toxicity:

Chemical Name	Test Results
Acetone	Oral LD_{50} (Rat): 5800 mg/kg
Acetone	Inhalation LC_{50} (Rat): 50100 mg/m^3/8H
Acetone	Dermal LD_{50} (Guinea pig): >9400 µl/kg
Methyl ethyl ketone	Oral LD_{50} (Rat): 2737 mg/kg
Methyl ethyl ketone	Inhalation LC_{50} (Rat): 23500 mg/m^3/8H
Methyl ethyl ketone	Dermal LD_{50} (Rabbit): 6480 mg/kg
Tetrahydrofuran	Oral LD_{50} (Rat): 1650 mg/kg

Chronic Toxicity: Repeated exposure may damage liver, kidneys, and central nervous system.

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:
UN No.: 1133
Proper Shipping Name: Adhesives

Class: 3
Packing group: II

TDG:
UN No.: 1133
Proper Shipping Name: Adhesives
Class: 3
Packing group: II

IATA:
UN No.: 1133
Proper Shipping Name: Adhesives
Class: 3
Packing group: II

IMDG:
UN No.: 1133
Proper Shipping Name: Adhesives
Class: 3
Packing group: II
EmS No.: F-E, S-D

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: B2, D2B

Inventory Status

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

US Regulations
CERCLA Hazardous Substance List (40 CFR 302.4):

Component	Reportable Quantity
Acetone	5000 lbs
2-Butanone	5000 lbs
Tetrahydrofuran	1000 lbs

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):

[X] Acute (Immediate) [ ] Chronic (Delayed) [X] Fire [ ] Reactive [ ] Pressure Generating

Section 313 Toxic Release Inventory (40 CFR 372): None

Clean Air Act (CAA) Section 112, 1990 Amendments, Statutory Hazardous Air Pollutants: None

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40CFR 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)): *Acetone*

Drug Enforcement Administration (21 CFR 1310.12(c)): Acetone, 2-butanone

TSCA:
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) (revised, effective January 16, 2007): Tetrahydrofuran

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: Acetone, 2-butanone, tetrahydrofuran
Michigan Critical Materials List (Michigan Natural Resources and Environmental Protection Act (Act. 451 of 1994)): None
Minnesota Hazardous Substances List: Acetone, 2-butanone, tetrahydrofuran
New Jersey Right-To-Know List: Acetone, 2-butanone, tetrahydrofuran
Pennsylvania Right-To-Know List: Acetone; 2-butanone; furan, tetrahydro-
Rhode Island Right-To-Know List: Acetone, 2-butanone, tetrahydrofuran

16 OTHER INFORMATION

Hazard Ratings

	Health Hazard	Fire Hazard	Reactivity Hazard	Special Hazard
NFPA	2	3	0	--

	Health Hazard	Fire Hazard	Reactivity Hazard
HMIS	2	3	0

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

Revision Information: New

Prepared by: Ariel Research Corporation, 3E Company
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DISCLAIMER OF LIABILITY:

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