
LEGGARI

PREP REPLACEMENT

Part A Safety Data Sheet

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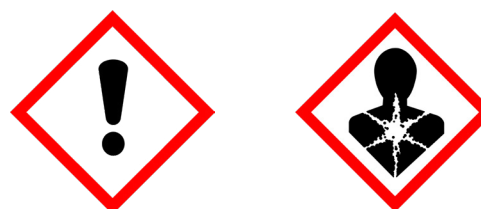


TRADE NAME (AS LABELED):	LEGGARI PREP REPLACEMENT PART A
SUPPLIER/MANUFACTURER'S NAME:	LEGGARI PRODUCTS, LLC
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GHS CLASSIFICATION:

Skin Corrosion / Irritation:	Category 2
Serious Eye Damage / Eye Irritation:	Category 2
Skin Sensitizer:	Category 1B
Reproductive toxicity:	Category 1B
Aquatic Environment Chronic Hazard:	Category 2
Specific target organ toxicity (single exposure): Central nervous system	Category 3



SIGNAL WORD: WARNING

HAZARD STATEMENTS:

H315: Causes skin irritation
 H317: May cause an allergic skin reaction
 H319: Causes serious eye irritation
 H336: May cause drowsiness or dizziness
 H360: May damage fertility or the unborn child
 H410: May cause damage to organs through prolonged or repeated exposure

PRECAUTIONARY STATEMENTS:

P261: Avoid breathing dust/fume/gas/mist/vapors/spray
 P264: Wash face, hands and any exposed skin thoroughly after handling.
 P272: Contaminated work clothing should not be allowed out of the workplace
 P273: Avoid release to the environment
 P280: Wear protective gloves/protective clothing/eye protection/face protection
 P302+P352: IF ON SKIN: Wash with plenty of soap and water
 P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes, Remove contact lenses, if present and easy to do. Continue rinsing
 P337+P313: If eye irritation persists: Get medical advice/attention:
 P333+P313: If skin irritation or rash occurs: Get Medical advice/attention.
 P362: Take of all contaminated clothing and wash it before reuse.
 P501: Dispose of contents and container in accordance with all local, regional, national and international regulations.

HMIS & NPFA RATINGS (SCALE 0-4)

HEALTH	2
FLAMMABILITY	1
REACTIVITY	0

HMIS & NFPA Hazard Ratings

Chronic Health Hazard = *
 Insignificant = 0
 Slight = 1
 Moderate = 2
 High = 3



3 | COMPOSITION/INFORMATION ON INGREDIENTS



CHEMICAL NAME	CAS #	% w/w	EXPOSURE LIMITS IN AIR					
			ACGIH		OSHA		IDLH mg/m ³	OTHER mg/m ³
			TLV mg/m ³	STEL mg/m ³	PEL mg/m ³	STEL mg/m ³		
Reaction product: bisphenol A-(epichlorhydrin)	25068-38-6	7 - 13	ND	ND	ND	ND	ND	ND
Epichlorohydrin-formaldehyde-phenol polymer	9003-36-5	1 - 5	ND	ND	ND	ND	ND	ND
1-methoxy-2-propanol	107-98-2	1 - 5	TWA 50 ppm	100 ppm	ND	ND	ND	ND
Formaldehyde	50-00-0	<0.002	0.3 ppm (ceiling)	ND	0.75 ppm (TWA)	2 ppm	ND	ND
Water and other ingredients. The other hazardous ingredients are each present in less than 1 percent concentration in this product.		Balance	The components present in the balance of this product do not contribute any significant, additional hazards. All hazard information pertinent to this product has been presented in the remaining sections of this Material Safety Data Sheet, per the requirements of Federal Occupational Safety and Health Hazard Communication Standard (29 CFR 1910.1200).					
VOC As Applied = 60 grams/liter (Part of a Multi-Component System)								

NE = Not Established. C = Ceiling Limit. See Section 16 for Definitions of Terms Used.

NOTE: All WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-1993 format.

4 | FIRST-AID MEASURES



Skin contact:

Wash immediately with plenty of water and soap. Remove contaminated clothing and shoes without delay. Obtain medical attention. Do not reuse contaminated clothing without laundering. Destroy or thoroughly clean shoes before reuse.

Eye contact:

Rinse immediately with plenty of water for at least 15 minutes. Obtain medical advice if there are persistent symptoms.

Inhalation:

If inhaled, remove from area to fresh air. If not breathing, give artificial respiration. Get immediate medical attention. If breathing is difficult, transport to medical care and if available, give supplemental oxygen.

Ingestion:

If swallowed, immediately give at least 3-4 glasses of water, but do not induce vomiting. If vomiting occurs, give fluids again. Do not give anything by mouth to an unconscious or convulsing person. Get immediate medical attention. Have physician determine whether vomiting or stomach evacuation is necessary.

MOST IMPORTANT SYMPTOM AND EFFECTS, BOTH ACUTE AND DELAYED

None known

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDS

Not applicable

5 | FIRE-FIGHTING MEASURES



Flash Pt, °C (method):

>100°C (212°F) Closed Cup

Autoignition temperature, °C:

NE

Flammability limits (in air by volume, %)

Lower LEL:

NE

Upper (UEL):

NE



Fire extinguishing materials:

Water spray, foam, Carbon Dioxide, Dry Chemical, Halon

Other:

Any "ABC" Class

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Run-off from fire control may cause pollution. Keep fire-exposed containers cool with water spray to prevent rupture due to excessive heat. High pressure water hose may spread product from broken containers increasing contamination. If involved in a fire, this product may decompose to produce a variety of compounds (i.e. carbon monoxide, carbon dioxide, aldehydes, nitrogen oxides and compounds). Emergency responders must wear the proper personal protective equipment suitable for the situation to which they are responding. Products of combustion are irritating to the respiratory tract and may cause breathing difficulty. Symptoms may be delayed several hours or longer depending upon the extent of exposure.

Explosion Sensitivity to Mechanical Impact:

Not sensitive.

Explosion Sensitivity to Static Discharge:

Not sensitive.

SPECIAL FIRE-FIGHTING PROCEDURES:

Incipient fire responders should wear eye protection. Structural fire fighters must wear Self-Contained Breathing Apparatus and full protective equipment. Move fire-exposed containers, if it can be done without risk to firefighters. If possible, prevent run-off water from entering storm drains, bodies of water, or other environmentally sensitive areas. If necessary, discard or decontaminate fire response equipment before returning such equipment to service.

6 | ACCIDENTAL RELEASE MEASURES



Spill and leak response

Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a spill, clear the affected area, protect people, and respond with trained personnel.

- The proper personal protective equipment for incidental releases (e.g.-1 L of the product released in a well-ventilated area) use impermeable gloves, specific for the material handled, goggles, face shield, and appropriate body protection. In the event of a large release, use impermeable gloves, specific for the material handled, chemically resistant suit and boots, and hard-hat. Self Contained Breathing Apparatus or respirator may be required where engineering controls are not adequate or conditions for potential exposure exist. When respirators are required, Select NIOSH/MSHA approved based on actual or potential airborne concentrations in accordance with latest OSHA and/or ANSI recommendations.

- Absorb spilled liquid with polypads or other suitable absorbent materials. Neutralize residue with sodium bicarbonate and water rinse. Decontaminate the area thoroughly. Test area with litmus paper to confirm neutralization. Place all spill residue in a suitable container. Dispose of in accordance with Federal, State, and local hazardous waste disposal regulations (see Section 13, Disposal Considerations).

7 | HANDLING AND STORAGE



Work practices and hygiene practices

As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash hands after handling this product. Do not eat or drink while handling this material. Remove contaminated clothing immediately. Discard contaminated clothing items, or launder before re-use. Inform anyone handling such contaminated laundry of the hazards associated with this product. Use ventilation and other engineering controls to minimize potential exposure to this product.

Storage and handling practices

All employees who handle this material should be trained to handle it safely. Avoid breathing mists or sprays generated by this product. Use in a well-ventilated location.

For non-bulk containers

Open containers slowly, on a stable surface. Containers of this product must be properly labeled. Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored in secondary containers, or in a diked area, as appropriate. Store containers away from incompatible chemicals. Keep container tightly closed when not in use. Wash thoroughly after using this material. Storage areas should be made of fire-resistant materials. If appropriate, post warning signs in storage and use areas. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged. Empty containers may contain residual liquid, therefore, empty containers should be handled with care.

Tank car shipments

Tank cars carrying this product should be loaded and unloaded in strict accordance with tank-car manufacturer's recommendation and all established on-site safety procedures. Appropriate personal protective equipment must be used (see Section 8, Engineering Controls and Personal Protective Equipment.). All loading and unloading equipment must be inspected, prior to each use. Loading and unloading operations must be attended, at all times. Tank cars must be level, brakes must be set or wheels must be locked or blocked prior to loading or unloading. Tank car (for loading) or storage tank (for unloading) must be verified to be correct for receiving this product and be properly prepared, prior to starting the transfer operations. Hoses



must be verified to be clean and free of incompatible chemicals, prior to connection to the tank car or vessel. Valves and hoses must be verified to be in the correct positions, before starting transfer operations. A sample (if required) must be taken and verified (if required) prior to starting transfer operations. All lines must be blown-down and purged before disconnecting them from the tank car or vessel.

Protective Practices during maintenance of contaminated equipment

Follow practices indicated in Section 6 (Accidental Release Measures). Make certain application equipment is locked and tagged-out safely. Always use this product in areas where adequate ventilation is provided. Decontaminate equipment before maintenance begins by a triple-rinse with water followed, if necessary, by using sodium bicarbonate and an additional rinse. Collect all rinsates and dispose of according to applicable Federal, State, or local procedures.

8 | EXPOSURE CONTROLS/PERSONAL PROTECTION



Ventilation and engineering controls:

If required use a corrosion-resistant ventilation system separate from other exhaust ventilation systems to ensure that there is no potential for overexposure to sprays, or mists of this product and that exposures are below those in section 2 (Composition and Information on Ingredients). Ensure eyewash/safety shower stations are available near areas where this product is used.

Respiratory protection:

Maintain airborne contaminant concentrations below exposure limits listed in Section 2 (Composition and Information on Ingredients). If respiratory protection is needed, use only protection authorized in 29 CFR 1910.134, or applicable State regulations. If adequate ventilation is not available or if there is potential for airborne exposure above the exposure limits (listed in Section 2) a respirator may be worn up to respirator exposure limitations, check with respirator equipment manufactures recommendations/limitations. For a higher level of protection use positive pressure supplied air respiration protection or Self Contained Breathing Apparatus or if oxygen levels are below 19.5% or are unknown.

EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATIONS OR IDLH CONDITIONS:

Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection. Use gloves to prevent prolonged skin contact.

Eye protection:

Splash goggles or safety glasses. Face-shields are recommended when the operation can generate splashes, sprays or mists.

Hand protection:

Wear appropriate gloves for routine industrial use. Use appropriate gloves for spill response, as stated in Section 6 of this MSDS (Accidental Release Measures).

Body protection:

Use body protection appropriate for task. Cover-all, rubber aprons, or chemical protective clothing made from natural rubber are generally acceptable, depending upon the task.

9 | PHYSICAL AND CHEMICAL PROPERTIES



Relative Vapor Density (air = 1):	ND	Odor:	Slight
Evaporation Rate (n-BuAc=1):	ND	pH:	7.5 - 10.5
Specific Gravity (water = 1):	1.04	Log water/Oil distribution coefficient:	Not available
Melting/Freezing Point:	Not established	Appearance and Color:	Pigmented liquid
Solubility in Water:	Dispersable	How to detect this substance: (warning properties)	ND
Boiling point:	>100°C (212°F)		
Vapor Pressure, mmHg @ 21°C:	ND		

10 | STABILITY AND REACTIVITY



Stability:

Stable.

Decomposition products:

Thermal decomposition products of this solution can include a variety of compounds. (i.e. carbon monoxide, nitrogen oxides and other compounds).



Materials with which substance is incompatible:

This product reacts with amines.

Hazardous polymerization:

Will not occur by itself. Exothermic reaction with epoxy amine curing agents is possible.

Conditions to avoid:

Avoid exposure or contact to extreme temperatures and incompatible chemicals i.e. mineral acids, organic acids, oxidizing agents and reactive metals.

11 | TOXICOLOGICAL INFORMATION

**TOXICITY DATA**

Additional toxicology information for components greater than 1 percent in concentration is provided below.

	CAS 25068-38-6	CAS 107-98-2
Acute oral effects (LD50):	(Rat) >2000 mg/kg	(Mouse) = 11,700 mg/kg
Acute Dermal Toxicity (LD50):	(Rabbit) > 2,000 mg/kg	(Rabbit) = 13,000 mg/kg
Acute Inhalation Toxicity (LC50):		(Rat) = 10,000 ppm 5h
Skin Irritation:	(Rabbit) Slight Irritation	
Eye Irritation:	(Rabbit) Slight Irritation	(Rabbit) Mild Irritation 24h
Sensitization:		
Mutagenicity:		

CARCINOGENICITY	CAS 25068-38-6		
Result	Species	Dose	Exposure
Negative - Oral-NOEL	Rat - Male, Female	15 mg/kg	2 years; 7 days per week
Negative - Dermal - NOEL	Rat - Female	1 mg/kg	2 years; 5 days per week
Negative - Dermal - NOEL	Mouse - Male	0.1 mg/kg	2 years; 3 days per week

SUSPECTED CANCER AGENT:

The components of this product does not contain 0.1% or more of any substance found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC, CAL/OSHA; and therefore are not considered to be, nor suspected to be, cancer-causing agents by these agencies.

IRRITANCY OF PRODUCT:

This product is moderately irritating to contaminated tissue.

SENSITIZATION TO THE PRODUCT:

Prolonged or repeated skin contact can result in the development of rashes, and other allergy-like symptoms

REPRODUCTIVE TOXICITY INFORMATION:

Listed below is information concerning the effects of this product and its components on the human reproductive system.

MUTAGENICITY	CAS 25068-38-6	
Test	Experiment	Result
OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria Metabolic activation: +/-	Positive
OECD 476 In Vitro Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic Metabolic activation: +/-	Positive
OECD 478 Genetic Toxicology: Rodent Dominant Lethal Test	Experiment: In vivo Mammalian-Animal Subject:	Negative
EPA OPPTS	Cell: Germ Experiment: In vivo Subject: Mammalian-Animal Cell: Somatic	Negative



TERATOGENICITY	CAS 25068-38-6		
Result	Species	Dose	Exposure
Negative - Oral	Rat - Female	>540 mg/kg NOEL:	10 days
Negative - Dermal	Rat - Female	>300 mg/kg NOEL:	13 days; 6 hours per day
Negative - Dermal	Rabbit- Female	180 mg/kg NOEL	13 days

REPRODUCTIVE TOXICITY CAS 25068-38-6

DEVELOPMENT:

Maternal Toxicity	Fertility	Toxin	Species	Dose	Exposure
Negative	Negative	Negative	Rat-Male, Female	Oral: 540 mg/kg NOEL:	238 days; 7 days per week

POTENTIAL CHRONIC HEALTH EFFECTS:

Chronic effects: : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Target Organs: : No know significant effects or critical hazards.

Carcinogenicity: : No know significant effects or critical hazards.

Mutagenicity : No know significant effects or critical hazards.

Teratogenicity : No know significant effects or critical hazards.

Fertility effects: : No know significant effects or critical hazards.

Developmental effects: : No know significant effects or critical hazards.

Medical conditions aggravated by over-exposure:

Pre-existing skin disorders may be aggravated by over-exposure to this product. Inhalation of this products mists may aggravate respiratory conditions.

Mutagenicity:

This product is not reported to produce mutagenic effects in humans.

Embryotoxicity:

This product is not reported to produce embryotoxic effects in humans.

Teratogenicity:

This product is not reported to cause teratogenic effects in humans. Reproductive Toxicity: This product is not reported to cause reproductive effects in humans.

* A mutagen is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An embryotoxin is a chemical which causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A teratogen is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance which interferes in any way with the reproductive process.

BIOLOGICAL EXPOSURE INDICES:

Currently there are no Biological Exposure Indices (BEIs) associated with the components of this product.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Skin disorders can be aggravated by over-exposure to this product. Inhalation of this products mists may aggravate respiratory conditions.

RECOMMENDATIONS TO PHYSICIANS:

Treat symptoms and eliminate over-exposure to this product.

12 | ECOLOGICAL INFORMATION



Overall Environmental Toxicity:

Toxic to aquatic life with long lasting effects.

RESULTS OF PBT AND vPvB ASSESSMENT

Not determined

HAZARDOUS INGREDIENT TOXICITY DATA:

REACTION PRODUCT:



Bisphenol A-(epichlorhydrin); epoxy resin

CAS: 25068-38-6

Toxicity to Algae:

EC50 <10 mg/l:

LC50 3.6 mg/l

Epichlorohydrin-formaldehyde-phenol polymer

CAS: 9003-36-5 NA

NA

Formaldehyde CAS: 50-00-0

Toxicity to fish:

LC50 100-136 mg/l:

LC50: 22.6-25.7 mg/l:

LC50: 1510 ug/l:

LC50: 41 mg/l:

13 | DISPOSAL CONSIDERATIONS

**PREPARING WASTES FOR DISPOSAL:**

Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

EPA WASTE NUMBER:

NA

14 | TRANSPORTATION INFORMATION

**US DOT**

Proper shipping name:	Environmentally hazardous substance, liquid, n.o.s
Hazard class:	9
Packing group:	III
UN Number:	UN3082
Transport Label Required:	Miscellaneous

TRANSPORT CANADA

Proper shipping name:	Environmentally hazardous substance, liquid, n.o.s
Hazard class:	9
Packing group:	III
UN Number:	UN3082
Marine Pollutant:	Yes (epoxy resins)
Transport Label Required:	Miscellaneous

ICAO/IATA

Proper shipping name:	Environmentally hazardous substance, liquid, n.o.s
Hazard class:	9
Packing group:	III
UN Number:	UN3082
Transport label required:	Miscellaneous

IMO

Proper shipping name:	Environmentally hazardous substance, liquid, n.o.s
Hazard class:	9



Packing group:	III
UN Number:	UN3082
Marine Pollutant:	Yes (epoxy resins)
Transport label required:	Miscellaneous

15 | REGULATORY INFORMATION



OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA)

This Safety Data Sheet has been prepared in compliance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

SARA REPORTING REQUIREMENTS:

- EPA SARA Title III Section 311/312 (40 CFR 370) Hazard Classification: Acute Health Hazard, Chronic Health Hazard
- EPA SARA Title III Section 313 (40 CFR 372) Components above 'de minimus' level:

SARA Threshold Planning Quantity:

Not applicable.

TSCA INVENTORY STATUS:

The components of this product are listed on the TSCA Inventory.

CERCLA REPORTABLE QUANTITY (RQ):

Formaldehyde (RQ 100 lbs) <0.002% by weight

OTHER FEDERAL REGULATIONS:

Not applicable.

STATE REGULATORY INFORMATION:

Components of this product are covered under specific State regulations, as denoted below:

New Jersey Right-to-know: The following is required composition information:

CAS Number:	50-00-0
RTK Number:	946
Chemical Name:	Formaldehyde

Pennsylvania Right-to-know: The following is required composition information:

CAS Number:	50-00-0
Chemical Name:	Formaldehyde
Common Name:	Formaldehyde

CALIFORNIA PROPOSITION 65:

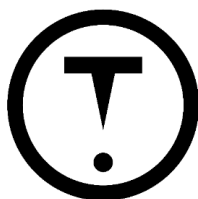
This product contains chemicals known by the State of California to cause cancer, birth defects, or other reproductive harm.

CARCINOGENS: Formaldehyde

Canadian DSL:

All components of this product are on the Canadian DSL

WHMIS SYMBOLS:



D2B - Poisonous and Infectious Materials/Other Effects

Class D - Poisonous and Infectious Material
Division 2 Materials Causing Other Toxic Effects



**A large number of abbreviations and acronyms appear on a MSDS. Some of these which are commonly used include the following:**

CAS #: This is the Chemical Abstract Service Number which uniquely identifies each constituent. It is used for computer-related searching.

EXPOSURE LIMITS IN AIR:

ACGIH - American Conference of Governmental Industrial Hygienists, a professional association which establishes exposure limits.

TLV - Threshold Limit Value - an airborne concentration of a substance which represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour **Time Weighted Average (TWA)**, the 15-minute **Short Term Exposure Limit**, and the instantaneous **Ceiling Level**. Skin, adsorption effects must also be considered.

OSHA - U.S. Occupational Safety and Health Administration.

PEL - **Permissible Exposure Limit** - This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (**Federal Register**: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL," is placed next to the PEL which was vacated by Court Order.

IDLH - **Immediately Dangerous to Life and Health** - This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury. **The DFG - MAK** is the Republic of Germany's Maximum Exposure Level, similar to the U.S. PEL. **NIOSH** is the National Institute of Occupational Safety and Health, which is the research arm of the U.S. Occupational Safety and Health Administration (OSHA). NIOSH issues exposure guidelines called **Recommended Exposure Levels (RELs)**. When no exposure guidelines are established, an entry of NE is made for reference.

HMIS HAZARD RATINGS:

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: **Health Hazard:** 0 (minimal acute or chronic exposure hazard); 1 (slight acute or chronic exposure hazard); 2 (moderate acute or significant chronic exposure hazard); 3 (severe acute exposure hazard; onetime over-exposure can result in permanent injury and may be fatal); 4 (extreme acute exposure hazard; onetime over-exposure can be fatal). **Flammability Hazard:** 0 (minimal hazard); 1 (materials that require substantial pre-heating before burning); 2 (combustible liquid or solids; liquids with a flash point of 38-93°C [100-200°F]); 3 (Class IB and IC flammable liquids with flash points below 38°C [100°F]); 4 (Class IA flammable liquids with flash points below 23°C [73°F] and boiling points below 38°C [100°F]). **Reactivity Hazard:** 0 (normally stable); 1 (material that can become unstable at elevated temperatures or which can react slightly with water); 2 (materials that are unstable but do not detonate or which can react violently with water); 3 (materials that can detonate when initiated or which can react explosively with water); 4 (materials that can detonate at normal temperatures or pressures).

NATIONAL FIRE PROTECTION ASSOCIATION: **Health Hazard:** 0 (material that on exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials); 1 (materials that on exposure under fire conditions could cause irritation or minor residual injury); 2 (materials that on intense or continued exposure under fire conditions could cause

temporary incapacitation or possible residual injury); 3 (materials that can on short exposure could cause serious temporary or residual injury); 4 (materials that under very short exposure could cause death or major residual injury). **Flammability Hazard and Reactivity Hazard:** Refer to definitions for "Hazardous Materials Identification System".

FLAMMABILITY LIMITS IN AIR:

Much of the information related to fire and explosion is derived from the National Fire Protection Association (NFPA). **FlashPoint** - Minimum temperature at which a liquid gives off sufficient vapors to form an ignitable mixture with air. **Autoignition Temperature:** The minimum temperature required to initiate combustion in air with no other source of ignition. **LEL** - the lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source. **UEL** - the highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.

TOXICOLOGICAL INFORMATION:

Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. Definitions of some terms used in this section are: **LD50** - Lethal Dose (solids & liquids) which kills 50% of the exposed animals; **LC50** - Lethal Concentration (gases) which kills 50% of the exposed animals; ppm concentration expressed in parts of material per million parts of air or water; mg/m³ concentration expressed in weight of substance per volume of air; mg/kg quantity of material, by weight, administered to a test subject, based on their body weight in kg. Data from several sources are used to evaluate the cancer-causing potential of the material. The sources are: **IARC** - the International Agency for Research on Cancer; **NTP** - the National Toxicology Program, **RTECS** - the Registry of Toxic Effects of Chemical Substances, **OSHA** and **CAL/OSHA**. **IARC** and **NTP** rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Sub-rankings (2A, 2B, etc.) are also used. Other measures of toxicity include **TDL_o**, the lowest dose to cause a symptom and **TCL_o** the lowest concentration to cause a symptom; **TDo**, **LDLo**, and **LD_o**, or **TC**, **TCo**, **LCL_o**, and **LCo**, the lowest dose (or concentration) to cause death. **BEI** - Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV.

REGULATORY INFORMATION:

This section explains the impact of various laws and regulations on the material. **EPA** is the U.S. Environmental Protection Agency. **WHMIS** is the Canadian Workplace Hazardous Materials Information System. **DOT** and **TC** are the U.S. Department of Transportation and the Transport Canada, respectively. Other acronyms used are: **Superfund Amendments and Reauthorization Act (SARA)**; the **Toxic Substance Control Act (TSCA)**; **Marine Pollutant** status according to the DOT; **California's Safe Drinking Water Act (Proposition 65)**; the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund)**; and various state regulations. This section also includes information on the precautionary warnings which appear on the materials package label.

Prepared by:**Revision Date:**

Leggari Products LLC
January 1, 2023

DISCLAIMER:

Leggari Products, LLC believes, to the best of its knowledge, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Leggari Products, LLC makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

