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## Patent Protected Biomaterials

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### SECTION 1: Identification

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Biomaterials Aliphatic Polyurethane Part A

**Manufacturer** located in Long Beach, CA 90813

CHEMTREC (Emergency Only): (800) 424-9300

POISON CENTER: (800) 562-8236

**Distributor:**

Ethical Material™

Contact Amy Rosos

+1 (818) 927-2757

ETHICALMATL@gmail.com

Relevant Identified Uses: Polyurethane Topcoat

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## SECTION 2: Hazards Identification

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### EMERGENCY OVERVIEW:

**OSHA Hazards:** No known OSHA hazards. Skin sensitization, Category 1, H317 GHS hazard.

**Hazards Not Otherwise Classified (HNOC)** or not covered by GHS: none.

**GHS Classification** in accordance with 29 CFR 1910.1200

### SYMBOLS

SIGNAL WORD	WARNING
HAZARD STATEMENT	H317 May cause an allergic skin reaction.
PRECAUTIONARY	P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
STATEMENT	P272 Contaminated work clothing should not be allowed out of the workplace.
PREVENTION	P280 Wear protective gloves.
PRECAUTIONARY	P302 + P352 If on skin: wash with plenty of water and soap
STATEMENT	P333 + P313 If skin irritation or rash occurs get medical advice/attention immediately.
RESPONSE	P363 Wash contaminated clothing before reuse.
PRECAUTIONARY	P501 Dispose of contents/container to an approved waste disposal plant.
STATEMENT (DISPOSAL) ADDITIONAL LABELING	The following % of the mixture consists of ingredient(s) with unknown acute CODES toxicity: 3.92%
EYE CONTACT	May cause eye irritation. Prolonged exposure may cause eye damage.
SKIN CONTACT	May be harmful if absorbed through skin. May cause skin irritation.
INHALATION	May be harmful if inhaled. May cause respiratory tract irritation.
INGESTION	May be harmful if ingested.
ACUTE HEALTH EFFECTS	May be irritating to skin, eyes, and digestive tract.
CHRONIC HEALTH EFFECTS	Repeated and prolonged exposures have not been studied.
AGGRIVATION of PRE-EXISTING CONDITIONS	Persons with pre-existing conditions may be more susceptible.

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## SECTION 3: Composition and Information on Ingredients

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**CHEMICAL FAMILY:** Aqueous Polyacrylic Polyester Diol Dispersion <sup>™</sup>

### HAZARDOUS COMPONENTS

Chemical Name	CAS#	% by Mass	Classification
Oxirane, 2,2'-[(1-methylethylidene) bis (4,1-phenyleneoxymethyl)] bis-, homopolymer	25085-99-8	50-60	H315, 2, Skin Irrit. H319, 2A, Eye Irrit. H317, 1, Skin Sens.
OTHER INGREDIENTS	CAS#	o/e by Mass	Hazardous
Water	7732-18-5	40-50%	no

This product contains an amine neutralizing agent which is bound in the matrix of this product as a salt. This amine salt is considered unreacted at room temperature. Generation of amine vapors is expected when this product is processed (heated) during the drying/hardening of the coating.

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## SECTION 4: First Aid Measures

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**PRIMARY ROUTES OF EXPOSURE:** Ingestion, dermal contact.

**EYE EXPOSURE:** Remove contacts if present. Immediately flush the eyes with water for at least 10-15 minutes. Seek medical attention if irritation persists.

**SKIN EXPOSURE:** Wash the affected area with soap and water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.

**INHALATION:** If breathed in, move person to fresh air. If not breathing, give artificial respiration.

**INGESTION:** If the person is conscious, rinse their mouth out with water. Never give anything by mouth to an unconscious person. If ingested, do not induce vomiting unless directed to do so by medical personnel. Seek medical attention.

**MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED:** Not expected to cause adverse acute health effects. The most important known symptoms and effects are described in Section 2 and/or in Section 11.

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## **SECTION 5: Fire Fighting Measures**

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**EXTINGUISHING MEDIUM:** Use water spray, alcohol-resistant foam, dry chemical, carbon dioxide or dry sand.

**SPECIAL FIRE FIGHTING PROCEDURES:** Wear self-contained breathing apparatus for firefighting if necessary.

**HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS:** By fire and thermal decomposition: carbon dioxide (CO<sub>2</sub>), Carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), dense black smoke, undetermined compounds.

**UNUSUAL FIRE OR EXPLOSION HAZARDS:** none.

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## **SECTION 6: Accidental Release Measures**

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**GENERAL PROTECTION:** See Section 8 for personal protect. Avoid breathing vapors, mist, or gas.

**ENVIRONMENTAL PRECAUTIONS:** Construct a dike to prevent spreading.

**METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN UP:** Cover spill with inert material (ex. Dry sand or earth) and collect for proper disposal. Dike or dam spilled material and control further spillage, if possible. Prevent from entering open drains and waterways. Wash spill area with soap and water. Ventilate area to remove vapors or dust.

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## SECTION 7: Handling and Storage

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**PRECAUTIONS FOR SAFE HANDLING:** Handle in accordance with good industrial hygiene and safety practices. Wear personal protective equipment. Wash thoroughly after handling. Keep closed when not in use. Avoid breathing dust, vapor, or mist. Avoid contact with eyes. Avoid contact with skin or clothing. Spraying increases the risk of hazardous exposure.

**RECOMMENDED STORAGE:** Store up to six (6) months after receipt of material by customer. Store in closed container at 7-25°C, separate from food products. DO NOT FREEZE. Storage class (TRGS 510): non-combustible liquids.

**SUBSTANCES TO AVOID:** Oxidizers and water reactive substances.

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## Section 8: Exposure Controls and Personal Protection

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The recommendations in this section should not be a substitute for a personal protective equipment (PPE) assessment performed by the employer as required by 29 CFR 1910 Subpart 1.

### **CONTROL PARAMETERS:**

Any component which is listed in Section 3 and is not listed in this section does not have a known ACGIH TLV. OSHA PEL or supplier recommended occupational exposure limit.

### **EXPOSURE CONTROLS:**

**APPROPRIATE ENGINEERING CONTROLS:** General industrial hygiene practice. Access to eyewash stations and safety showers.

### **PERSONAL PROTECTIVE EQUIPMENT:**

**EYE PROTECTION:** Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**SKIN PROTECTION:** Wear protective clothing and gloves.

**VENTILATION:** General dilution and local exhaust as necessary to control airborne vapors, mists, dusts, and thermal decomposition products below appropriate airborne concentration standards/guidelines. Thermal processing operations should be ventilated to control gases and fumes given off during processing. Curing ovens must be ventilated to prevent the buildup of explosive atmospheres and to prevent off gases from entering the workplace.

**RESPIRATOR:** Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU) during high temperature processing or when thermal decomposition is suspected.

**ADDITIONAL PROTECTION:** Employees should wash their hands and face before eating, drinking, or using the toilet. Educate and train employees in the safe use and handling of this product. Store separate from food products.

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## Section 9: Physical and Chemical Properties

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<b>FORM</b>	Liquid
<b>APPEARANCE/COLOR</b>	Milky white
<b>UPPER/LOWER FLAMMABILITY LIMIT</b>	No data available
<b>ODOR</b>	Mild, characteristic
<b>VAOR PRESSURE</b>	No data available
<b>ODOR THRESHOLD</b>	No data available
<b>VAPOR DENSITY</b>	No data available
<b>pH</b>	No data available
<b>RELATIVE DENSITY</b>	No data available
<b>MELTING/FREEZING POINT ©</b>	0C (32F) similar to water
<b>SOLUBILITY</b>	Miscible in water
<b>BOILING POINT (C)</b>	100c (212f) similar to water
<b>FLASH POINT (C)</b>	No data available
<b>EVAPORATION RATE</b>	No data available
<b>FLAMMABILITY</b>	No data available
<b>PARTITION COEFFICIENT</b>	No data available
<b>AUTO-IGNITION TEMPERATURE (C)</b>	No data available
<b>DECOMPOSITION TERMPERATURE (C)</b>	No data available
<b>MOLECULAR WEIGHT</b>	No data available
<b>DYNAMIC VISCOSITY</b>	1,000-3,500 mPa.s@ 23C (73.4°f) (DIN 53019)

<b>KINEMATIC VISCOSITY</b>	No data available
<b>SPECIFIC GRAVITY</b>	No data available
<b>BULK DENSITY</b>	No data available

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## SECTION 10: Stability and Reactivity

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**REACTIVITY:** No data available

**CHEMICAL STABILITY:** stable under recommended storage conditions. DO NOT FREEZE.

**OTHER:**

**POSSIBILITY OF HAZARDOUS REACTIONS:** Hazardous polymerization does not occur.

**CONDITIONS TO AVOID:** No data available.

**MATERIALS TO AVOID:** Oxidizers and water reactive materials.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Hazardous decomposition products may be formed under fire and thermal decomposition conditions – carbon dioxide, carbon monoxide, oxides of nitrogen, dense black smoke, other undetermined compounds. See Section 5 in the event of fire.

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## Section 11: Toxicological Information

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ACUTE TOXICITY: Polyester Diol Dispersion	
Oral LD50	>5,000 mg/kg (calculation method)
Inhalation LD50	No data available
Dermal LD50	No data available
Other information on acute	No data available
Toxicity: SKIN CORROSION/IRRITATION	No data available
SERIOUS EYE DAMAGE/IRRITATION	No data available
RESPIRATORY OR SKIN SENSITIZATION	No data available
GERM CELL MUTAGENICITY	No data available

## CARCINOGENICITY

**IARC:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**ACGIH:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.

**NTP:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

**OSHA:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

REPRODUCTIVE TOXICITY	No data available
TERATOGENICITY	No data available
SPECIFIC TARGET ORGAN TOXICITY	No data available
ASPIRATION HAZARD	No data available
POTENTIAL HEALTH EFFECTS	
Inhalation	May be harmful if inhaled. May cause respiratory tract irritation
Ingestion	May be harmful if swallowed
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation
SYNERGISTIC EFFECTS	No data available
ADDITIONAL INFORMATION	RTECS not available

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## SECTION 12: Ecological Information

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AQUATIC/TERRESTRIAL ORGANISM TOXICITY	No data available
ASPIRATION HAZARD	No data available
PERSISTANCE AND DEGRADABILITY	No data available
BIOACCUMULATIVE POTENTIAL	No data available
MOBILITY IN SOIL	No data available
PBT AND vPvB ASSESSMENT	No data available
OTHER ADVERSE EFFECTS	No data available



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## SECTION 13: Disposal Considerations

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DISPOSAL: Dispose of according to local, state, and federal regulations. Refer to Section 8.

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## SECTION 14: Transportation Information

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DOT (US)	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods
SHIPPING NAME (CFR): SHIPPING NAME (IATA)	Not dangerous goods

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## SECTION 15: Regulatory Information

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<b>OSHA HAZARDS</b>	No known OSHA hazards
<b>DSL STATUS</b>	All components of this product are on the Canadian DSL list.
<b>TSCA S(b) Inventory</b>	No substances are subject to TSCA 8(b) inventory notification requirements
<b>TSCA 12(b) export</b>	No substances are subject to TSCA 12(b) export notification requirements.
<b>US EPA CERCLA HAZARDOUS SUBSTANCES (40 CFR 302) COMPONENTS</b>	None.
<b>SARA 302 COMPONENTS</b>	No chemical in this material is subject the reporting requirements of SARA Section 302.
<b>SARA 313 COMPONENTS</b>	No chemical in this material is subject the reporting requirements of SARA Section 313.
<b>SARA 311/312 HAZARDS</b>	No SARA hazards.
<b>US EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes</b>	Under RCRA it is the responsibility of the person who generates a solid waste, as defined in 40 CFR 261.2, to determine if that waste is a hazardous waste.

<b>and Appendix VII Hazardous Constituents (40CFR 261)</b>	
<b>CA PROP 65 COMPONENTS</b>	This product does not contain any chemical(s) known to the State of California to cause cancer, birth defects, or any other reproductive harm.
<b>CFATS (Chemical Facility Anti- Terrorism Standards) Chemicals</b>	To the best of our knowledge, this product does not contain Appendix A Chemicals of Interest (COI), at or above the Screening Threshold Quantity (STQ), as defined by the Department of Homeland Security Chemical Facility Anti-Terrorism Standard (CFATS, 6 CFR Pan 27)

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## SECTION 16: Other Information

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**Disclaimer:** The information herein is believed to be accurate and reliable as of the date compiled. However, **the individual(s) or company sharing this data** makes no representation, warranty, or guarantee of any kind with respect to the information contained in this document or any use of the product based on this information.

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