

MATERIAL SAFETY DATA SHEET

IN CASE OF EMERGENCY CALL: CHEMTREC 1-800-424-9300 CONTACT ONLY IN CASE OF CHEMICAL EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT INVOLVING CHEMICALS.

PRODUCT NAME: **ECOPOXY CLEAR FAST SET HARDENER**

COMPANY NAME: ECOPOXY SYSTEMS / OCEANEARING RESEARCH AND DEVELOPMENT

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1. INGREDIENTS

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|--------------------------|----------------|
| ISOPHORONE DIAMINE | CAS# 2855-13-2 |
| BENZYL ALCOHOL | CAS# 100-51-6 |
| 1,3-BENZENEDIMETHANAMINE | CAS# 1477-55-0 |
| SOYBEAN OIL | |

THIS DOCUMENT IS PREPARED PURSUANT TO THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200) IN ADDITION, OTHER SUBSTANCES NOT HAZARDOUS PER THIS OSHA STANDARD MAY BE +LISTED. WHERE PROPRIETARY INGREDIENT SHOWS, THE IDENTITY MAY BE MADE AVAILABLE AS PROVIDED IN THIS STANDARD.

2. PHYSICAL DATA

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|-----------------|---------------------------|
| BOILING POINT: | >150°C @ 5 mm HG |
| VAPOR PRESSURE: | .02mmHG@20°C,68°F |
| VAPOR DENSITY: | 5.88 |
| SOL. IN WATER: | MODERATELY SOLUBLE |
| SP. GRAVITY: | 1.0-1.01 |
| APPEARANCE: | PALE STRAW COLORED LIQUID |
| ODOR: | AMINE ODOR |

3. FIRE AND EXPLOSION HAZARD DATA

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|---------------------------|--|
| FLASH POINT: 213°F | METHOD USED: PMCC |
| FLAMMABLE LIMITS: | LFL: NOT DETERMINED UFL: NOT DETERMINED |
| EXTINGUISHING MEDIA: | WATER FOG, ALCOHOL FOAM, CO2, DRY CHEMICAL |
| FIRE & EXPLOSION HAZARDS: | USE FULL PROTECTIVE CLOTHING |
| FIRE-FIGHTING EQUIPMENT: | USE A POSITIVE PRESSURE, SELF-CONTAINED BREATHING APPARATUS. |

4. REACTIVITY DATA

STABILITY: (CONDITIONS TO AVOID) CAN REACT STRONGLY WITH EPOXY RESINS AT ELEVATED TEMPERATURES.

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) EXPOXY RESINS UNDER UNCONTROLLED CONDITIONS AND STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS: NITROGEN OXIDES WHEN BURNED

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

5. ENVIRONMENTAL AND DISPOSAL INFORMATION

ACTION TO TAKE FOR SPILL AND LEAKS:

LARGE SPILL: DIKE UP AND PUMP INTO APPROPRIATE CONTAINERS.

SMALL SPILL: USE NONCOMBUSTIBLE ABSORBENT MATERIAL (SAND) AND SHOVEL INTO SUITABLE CONTAINERS.

DISPOSAL METHOD: LARGE QUANTITIES SHOULD BE RECOVERED. COLLECT SMALL QUANTITIES IN WASTE METAL DRUMS AND SEAL FOR REMOVAL TO AN APPROVED LANDFILL OR INCINERATE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

6. HEALTH HAZARD DATA

EYES: MAY CAUSE SEVERE IRRITATION WITH CORNEAL INJURY, WHICH MAY RESULT IN PERMANENT IMPAIRMENT OF VISION, EVEN BLINDNESS. VAPORS MAY IRRITATE EYES.

SKIN CONTACT: MAY CAUSE SEVERE INJURY TO SKIN FOLLOWING PROLONGED OR REPEATED CONTACT AND MAY CAUSE SKIN SENSITIZATION OR OTHER ALLERGIC RESPONSES.

SKIN ABSORPTION: A SINGLE PROLONGED EXPOSURE MAY RESULT IN THE MATERIAL BEING ABSORBED IN HARMFUL AMOUNTS. THE LD₅₀ FOR SKIN ABSORPTION HAS NOT BEEN DETERMINED.

INGESTION: SINGLE DOSE ORAL TOXICITY IS LOW. THE ORAL LD₅₀ FOR SOYBEAN OIL IS 23g/kg Oral Rat. THE LC₅₀ FOR SOYBEAN OIL IS 240mg/L.

INGESTION MAY CAUSE GASTROINTESTINAL IRRITATION OR ULCERATION.

INGESTION MAY CAUSE BURNS OF MOUTH AND THROAT.

INHALATION: MAY CAUSE RESPIRATORY SENSITIZATION OR ASTHMA IN SUSCEPTIBLE INDIVIDUALS. EXCESSIVE EXPOSURE MAY CAUSE IRRITATION TO UPPER RESPIRATORY TRACT.

SYSTEMIC & OTHER EFFECTS: RESULTS OF IN VITRO ("TEST TUBE") MUTAGENICITY TESTS HAVE BEEN NEGATIVE.

7. FIRST AID

EYES: IMMEDIATE AND CONTINUOUS IRRIGATION WITH FLOWING WATER FOR AT LEAST 30 MINUTES IS REQUIRED. PROMPTLY SEEK MEDICAL ATTENTION

SKIN: IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING, PREFERABLY UNDER A SAFETY SHOWER. SEEK MEDICAL ATTENTION IMMEDIATELY. AVOID PROLONGED OR REPEATED CONTACT TO SKIN. WASH THOROUGHLY AFTER HANDLING.

INGESTION: DO NOT INDUCE VOMITING. GIVE LARGE AMOUNTS OF WATER OR MILK IF AVAILABLE. **NEVER GIVE ANYTHING BY MOUTH TO AN UNCONCIOUS PERSON.** TRANSPORT TO MEDICAL FACILITY IMMEDIATELY.

INHALATION: REMOVE TO FRESH AIR IF EFFECTS OCCUR. CONSULT A PHYSICIAN.

NOTE TO PHYSICIAN: CORROSIVE, MAY CAUSE STRICTURE. IF LAVAGE IS PERFORMED, SUGGEST ENDOTRACHEAL AND/OR ESOPHAGOSCOPIC CONTROL. IF BURN IS PRESENT, TREAT AS ANY THERMAL BURN, AFTER DECONTAMINATION. NO SPECIFIC ANTIDOTE. SUPPORTIVE CARE. TREATMENT BASED ON JUDGMENT OF THE PHYSICIAN IN RESPONSE TO REACTIONS OF PATIENT.

8. HANDLING PRECAUTIONS

EXPOSURE GUIDELINE(S): NONE ESTABLISHED.

VENTILATION: CONTROL AIRBORNE CONCENTRATION BELOW THE EXPOSURE GUIDELINE. USE ONLY WITH ADEQUATE VENTILATION. LOCAL EXHAUST VENTILATION MAY BE NECESSARY FOR SOME OPERATIONS.

RESPIRATORY PROTECTION: ATMOSPHERIC LEVELS SHOULD BE MAINTAINED BELOW THE EXPOSURE GUIDELINE. WHEN RESPIRATORY PROTECTION IS REQUIRED FOR CERTAIN OPERATIONS, USE AN APPROVED AIR-PURIFYING RESPIRATOR.

SKIN PROTECTION: USE PROTECTIVE CLOTHING IMPERVIOUS TO THIS MATERIAL. SELECTION OF SPECIFIC ITEMS SUCH AS GLOVES, BOOTS, APRON, OR FULL-BODY SUIT WILL DEPEND ON OPERATION. SAFETY SHOWER SHOULD BE LOCATED IN IMMEDIATE WORK AREA. REMOVE CONTAMINATED CLOTHING IMMEDIATELY, WASH SKIN AREA WITH SOAP AND WATER AND LAUNDRER CLOTHING BEFORE REUSE. CONTAMINATED LEATHER ITEMS, SUCH AS SHOES, BELTS AND WATCHBANDS SHOULD BE REMOVED AND DESTROYED.

EYE PROTECTION: USE CHEMICAL GOGGLES. IF VAPOR EXPOSURE CAUSES EYE IRRITATION, USE A FULL-FACE RESPIRATOR. EYE WASH FOUNTAIN SHOULD BE LOCATED IN IMMEDIATE WORK AREA.

9. ADDITIONAL INFORMATION**SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:**

GROUND ALL TRANSFER EQUIPMENT. HOLD BULK STORAGE UNDER A NITROGEN BLANKET. THIS PRODUCT SHOULD NOT COME IN CONTACT WITH COPPER OR COPPER-BEARING ALLOYS. GOOD GENERAL HOUSEKEEPING PROCUDURES SHOULD BE FOLLOWED.

10. NFPA HAZARD RATING

4=EXTREME 3=HIGH 2=MODERATE 1=SLIGHT 0=INSIGNIFICANT

| | |
|-------------|---|
| HEALTH: | 3 |
| FIRE: | 1 |
| REACTIVITY: | 0 |
| SPECIFIC: | |

11. REGULATORY INFORMATION: STATUS ON SUBSTANCE LISTS

THE CONCENTRATIONS SHOWN IN THIS DOCUMENT ARE MAXIMUM OR CEILING LEVELS (WEIGHT %) TO BE USED FOR REGULATIONS. TRADE SECRETS ARE INDICATED BY "TS".

FEDERAL EPA**COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980****(CERCLA)**

REQUIRES NOTIFICATION OF THE NATIONAL RESPONSE CENTER OF RELEASE OF QUANTITIES OF HAZARDOUS SUBSTANCES EQUAL TO OR GREATER THAN THE REPORTABLE QUANTITIES (RQ'S) IN 40 CFR 302.4. COMPONENTS PRESENT IN THIS PRODUCT AT LEVEL WHICH COULD REQUIRE UNDER THE STATUTE ARE:

| <u>CHEMICAL NAME</u> | <u>CAS NUMBER</u> | <u>% BY WEIGHT</u> | <u>RQ</u> |
|-----------------------------|--------------------------|---------------------------|------------------|
| NONE | | | |

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III

SECTIONS (301-304) REQUIRE EMERGENCY PLANNING BASED ON THRESHOLD PLANNING QUANTITIES (TPQ'S) AND RELEASE REPORTING BASED ON REPORTABLE QUANTITIES (RQ'S) IN 40 CFR 355. COMPONENTS PRESENT IN THIS PRODUCT AT A LEVEL WHICH COULD REQUIRE REPORTING UNDER THIS STATURE ARE:

| <u>CHEMICAL NAME</u> | <u>CAS NUMBER</u> | <u>% BY WEIGHT</u> |
|-----------------------------|--------------------------|---------------------------|
| NONE | | |

SECTIONS (311-312) REQUIRE PRODUCTS BE REVIEWED AND APPLICABLE EPA HAZARD DEFINITIONS BE IDENTIFIED AND MADE KNOWN.

EPA HAZZARD CLASSIFICATIONS

| ACUTE HAZARD | CHRONIC HAZARD | FIRE HAZARD | PRESSURE HAZARD | REACTIVE HAZARD |
|--------------|----------------|-------------|-----------------|-----------------|
| YES | YES | NO | NO | NO |

SECTION (313) REQUIRES SUBMISSION OF ANNUAL REPORTS OF RELEASE OF TOXIC CHEMICALS THAT APPEAR IN 40 CFR 371 (FOR SARA 313). THIS INFORMATION MUST BE INCLUDED IN ALL MSDS'S THAT ARE DISTRIBUTED FOR THIS MATERIAL. COMPONENTS PRESENT IN THIS PRODUCT AT LEVEL WHICH COULD REQUIRE REPORTING UNDER THE STATUE ARE:

| <u>CHEMICAL NAME</u> | <u>CAS NUMBER</u> | <u>% BY WEIGHT</u> |
|-----------------------------|--------------------------|---------------------------|
| NONE | | |

IF YOU ARE UNSURE IF YOU MUST REPORT MORE INFORMATION, CALL THE EPA EMERGENCY PLANNING AND RIGHT-TO-KNOW HOT LINE: 1-800-535-0202 OR 1-202-479-2449.

TOXIC SUBSTANCES CONTROL ACT (TCSA)

THE COMPONENTS OF THIS PRODUCT ARE CONTAINED ON THE CHEMICAL SUBSTANCE INVENTORY LIST.

OTHER REGULATORY INFORMATION

D.O.T. SHIPPING NAME: AMINES, LIQUID, CORROSIVE, N.O.S. CLASS 8, UN 1760 PG III

CONTAINS ISOPHORONEDIAMINE

THE INFORMATION HEREIN IS GIVEN IN GOOD FAITH, BUT NO WARRANTY EXPRESSED OR IMPLIED IS MADE. MANUFACTURER URGES SUPPLIERS AND USERS OF THIS PRODUCT TO EVALUATE ITS SUITABILITY AND COMPLIANCE WITH LOCAL REGULATION.