

MATERIAL SAFETY DATA SHEET



Manufacturer's Name and Address

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ElectRelease E4 Parts A & B

SECTION I

CHEMICAL PRODUCT

Product: ElectRelease E4 Parts A & B

SECTION II

COMPOSITION AND HAZARDOUS INGREDIENTS

| ID | Chemical Name | CAS # | Range Weight % (A) |
|-----|---------------------------------------|------------|--------------------|
| 1-A | Bisphenol A/Epichlorohydrin | 25068-38-6 | >50 |
| 2-A | Poly (ethylene glycol) | 25322-68-3 | |
| 3-A | Trade secret (dimethicone surfactant) | | |
| 4-A | Trade secret (salts) | | |

| ID | Chemical Name | CAS # | Range Weight % (B) |
|-----|---------------------------------------|------------|--------------------|
| 1-B | Tetraethylenepentamine | 112-57-2 | } >36 |
| | Tetraethylenetetramine | 112-24-3 | |
| | Polyethylene polyamine mix | 29320-38-5 | |
| 2-B | Bisphenol A/Epichlorohydrin | 25068-38-6 | >25 |
| 3-B | Poly (ethylene glycol) | 25322-68-3 | |
| 4-B | Trade secret (dimethicone surfactant) | | |
| 5-B | Trade secret (salts) | | |

SECTION III

HAZARD IDENTIFICATION

Routes of Entry Inhalation, Eye Contact, Skin Contact, Ingestion

Eye Contact: (B)

Corrosive to the eyes and may cause severe damage including blindness.

Skin Contact: (B)

Corrosive to the skin. May cause sensitization. May be toxic if absorbed through skin.

Inhalation: (A & B)

Vapors/mists may be irritating.

Ingestion: (A & B)

Not expected to be a relevant route of exposure. However, may cause severe and permanent damage to mouth, throat and stomach.

Signs and Symptoms:

Irritation as noted above.

Aggravated Medical Conditions:

Preexisting eye, skin and respiratory disorders may be aggravated by exposure to product.

SECTION IV

FIRST AID MEASURES

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Rinse continuously with water while on route for medical attention.

Skin Contact:

Immediately remove contaminated clothing or shoes, wipe excess from skin and flush with plenty of water for at least 15 minutes. Use soap if readily available, or follow by thoroughly washing with soap and water. Do not reuse clothing until thoroughly decontaminated. Seek medical attention.

Inhalation:

Remove victim to fresh air. Seek medical attention.

Ingestion:

Do not induce vomiting. Give one glass of water unless victim is drowsy, convulsing, or unconscious. Seek medical attention.

Note to Physician:

None Identified.

SECTION V

FIRE FIGHTING MEASURES

Extinguishing Media:

Carbon dioxide, dry chemical, foam, water fog.

Special Fire Fighting Procedures and Precautions:

Wear self-contained breathing apparatus.

Unusual Fire and Explosion Hazards:

Irritating and toxic gases may be generated if material ignites.

SECTION VI

ACCIDENTAL RELEASE

Avoid disposal/discharge to sewer systems. Avoid personal contact with spilled material. Wear gloves, goggles and respirators as necessary. Dike and cover spill with absorbent material. Sweep or shovel up. Shovel absorbed material into DOT-approved plastic container and dispose of accordingly.

SECTION VII

HANDLING AND STORAGE

Storage Precautions- Do not allow to freeze. Store in closed containers in a dry place with adequate ventilation. Keep away from heat and flames.

SECTION VIII

EXPOSURE CONTROLS/PERSONAL PROTECTION

RECOMMENDED EXPOSURE LIMITS- NONE ESTABLISHED

PPE-

Respiratory Protection:

Avoid prolonged exposure to vapors. Provide local exhaust for proper ventilation. Wear NIOSH/MSHA approved respirator in confined areas in accordance with 29 CFR 1910.134.

Protective Clothing:

Avoid contact with eyes. Wear chemical goggles if there is potential contact with eyes. Avoid contact with skin and clothing. Wear chemical-resistant clothing such as gloves, outer clothing or apron. Gloves constructed of polyethylene/polyethylene vinyl alcohol laminate (EVAL) are recommended.

Additional Protective Measures:

Provide eye wash fountains and safety showers should be available for emergency use. Wash hands thoroughly after handling and before eating or smoking.

SECTION IX

PHYSICAL/CHEMICAL PROPERTIES

Boiling Point (Deg F)

See Note

Specific Gravity (H₂O = 1)

(A)- 1.04 (B)- 1.05

Vapor Pressure (MM HG)

Melting Point (Deg F)

See Note

Solubility In Water

A – partial
B – partial

Vapor Density (Air = 1)

unknown
unknown

Evaporation Rate (Normal Butyl Acetate = 1)

pH

(A)- 5.00
(B)- 11.29

Appearance and Odor: (A) - White. Slight sweet or tangy odor. Semi-viscous liquid, pulls in string-like fashion when mixing
(B) - Glossy off-white. Very mild, pungent odor. Viscous, consistency of most unfilled staged epoxy resins.

Note: (A) – Decomposition begins 300 F (150 C)
(B) – Slight charring begins at 390 F (200 C)

SECTION X

STABILITY AND REACTIVITY

Flash Point:

(A) 255 F (124 C) Method: Pensky Martens D-93
(B) 240 F (115 C) Method: Pensky Martens D-93

Lower Flammable Limit:

Less than 4.00 est

Stability: Stable

Hazardous Polymerization: Will not occur

Conditions and Materials to Avoid: Flames, excessive heat

Hazardous Decomposition Products:

SECTION XI

TOXICOLOGICAL INFORMATION

Component 4-A/5-B Trade secret (salts).

Avoid contact with strong acids (Causes release of Hydrofluoric Acid highly toxic/caustic vapors)

Toxic effects: Large doses or prolonged exposure may cause fluorosis (bone damage), and kidney or liver damage.
Dust inhalation may irritate respiratory tract, cause pulmonary edema, congestion and fluorosis.

Target Organ: Eye, Skin, Kidney, Liver, Lung and Bone

Permissible Exposure Limits: Fluorides as Fluoride Ion = 2.5 mg/m³ ACGIH TLV.

SECTION XII **ECOLOGICAL INFORMATION**

Data not yet available

SECTION XIII **DISPOSAL CONSIDERATION**

Dispose of in accordance with local, state and federal regulations.

SECTION XIV **TRANSPORTATION INFORMATION**

(A)- Not Regulated

Department of Transportation Classification: (B) Haz Class 8

DOT Proper Shipping Name: (B) Amines, Liquid, Corrosive, n.o.s.

SECTION XV **REGULATORY INFORMATION**

The components of this product are listed on the EPA/TSCA inventory of chemical substances. The following components: 1-A/2-B Bisphenol A/Epichlorohydrin listed as an acute health hazard (H-1), 1-B Amine Mixture listed as an acute/chronic health hazard (H-1/H-2) and 3-A/4-B Dimethicone surfactant listed as an acute health hazard (H-1), are listed in accordance with SARA Title III, Section 313, Chapters 311/312.

SECTION XVI **OTHER INFORMATION**

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

| State Listed Component | CAS No. | Percent (A or B) | State Code |
|-------------------------------|----------------|-------------------------|-------------------|
| Tetraethylenepentamine | 112-57-2 | | FL, MA, NJ, PA |
| Poly (ethylene glycol) | 25322-68-3 | | MN |

The information contained herein is based on data available to us and is believed to be correct. However, EIC Laboratories makes no warranty, expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. EIC assumes no responsibility for injury from the use of the product described herein.