# SAFETY DATA SHEET

## 1.0 IDENTIFICATION

**1.1 GHS product identifier:** EL-323TC Hardener

**1.2 Other means of identification:** Amine Adduct Hardener

**1.3 Recommended use of the chemical and restrictions on use:** N/A

**1.4 Supplier's details:** CASS POLYMERS OF MICHIGAN, INC.
815 WEST SHEPHERD STREET
CHARLOTTE MI 48813 USA
INFORMATION PHONE NUMBER: (248) 588-2270

**1.5 Emergency phone number:** (703) 527-3887(Call Collect)

## 2.0 HAZARDS IDENTIFICATION

**2.1 Classification of the substance or mixture:**

Acute Toxicity – Dermal 4, Acute Toxicity – Oral 4

**2.2 GHS label elements:**

**Signal Word:** Warning
**Hazard Statement:** Harmful in contact with skin
**Prevention:** Wear protective gloves/protective clothing.
**Response:** If on skin: wash with plenty of soap and water. Call a poison center or doctor/physician if you feel unwell. Immediate, continued and thorough washing in flowing water for at least 30 minutes is imperative while removing contaminated clothing. Prompt medical consultation is essential. Wash contaminated clothing before reuse.
**Disposal:** Dispose of contents/container by incineration under controlled conditions in accordance with all local and national laws and regulations.

**Signal Word:** Warning
**Hazard Statement:** Harmful if swallowed
**Prevention:** Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.
**Response:** If swallowed: Call a poison center or doctor/physician if you feel unwell. Rinse mouth.
**Disposal:** Dispose of contents/container by incineration under controlled conditions in accordance with all local and national laws and regulations.

**2.3 Other hazards which do not result in classification:** Flammable Liquid

**2.4 Hazards Material Information System (United States):**

| | |
|---|---|
| **Health** | **3** |
| **Flammability** | **1** |
| **Physical Hazard** | **0** |

Hazard Codes: 0=Chronic Hazard 0=Minimal Hazard, 1=Slight Hazard, 2=Moderate Hazard, 3=Serious Hazard, 4=Severe Hazard

## 3.0 COMPOSITION/INFORMATION ON INGREDIENTS

**3.1 Mixtures**

| Chemical Identity | CAS No. | Concentration |
|---|---|---|
| Polyamide Resin | 68410-23-1 | 10% - 15% |
| Propoxylated TETA | 26950-63-0 | 5% - 10% |
| Nonyl Phenol | 84852-15-3 | 10% - 15% |
| Silica Alumina Ceramic | 12736-96-8 | 50% - 60% |
| Siloxanes and Silicones, di-Me, reaction products with Silica | 67762-90-7 | >1% |
| Borosilcate Glass | 65997-17-3 | 1% - 5% |
| Amorphous Silica | 7631-86-9 | <1% |

## 4.0 FIRST-AID MEASURES

### 4.1 Description of necessary first-aid measures:

**Eye Contact:** Hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Seek medical advice.

**Skin Contact:** Remove contaminated clothing and shoes. Remove product and immediately flush affected area with water for at least 15 minutes. Cover the affected area with a sterile dressing or clean sheeting and transport for medical care. Do not apply greases or ointments. Control shock, if present.

**Inhalation:** Move patient to fresh air. If breathing has stopped or is labored give assisted respiration (e.g. mouth-to-mouth). Supplemental oxygen may be indicated. Seek medical advice. Turn victim's head to the side to prevent aspiration of vomit.

**Ingestion:** If person is conscious and can swallow, immediately give two glasses of water, but do not induce vomiting. This material is corrosive. If vomiting occurs, give fluids again. Have physician determine if condition of patient will permit induction of vomiting or evacuation of stomach. Do not give anything by mouth to an unconscious or convulsing person.

**Other Instructions:** Swallowing of this corrosive material may result in severe ulceration, inflammation, and possible perforation of the upper alimentary tract with hemorrhage and fluid loss. Aspiration of this product during induced emesis can result in severe lung injury. If evacuation of stomach is necessary, use method least likely to cause aspiration, such as gastric lavage after endotracheal intubation. Contact Poison Control Center for additional treatment information.

### 4.2 Most Important symptoms/effects, acute and delayed:

**Acute Health Hazards:**

**Inhalation:** Harmful if inhaled and may cause delayed lung injury. May cause nose, throat, and lung irritation. Inhalation of vapors and/or aerosols in high concentration may cause irritation of respiratory system.

**Eye contact:** Product vapor in low concentrations can cause lacrimation, conjunctivitis and corneal edema when absorbed into the tissue of the eye from the atmosphere. Corneal edema can cause the perception of "blue haze" or "fog" around lights, although this is a temporary effect and has no known residual effect. Causes eye irritation.

**Skin contact:** Causes skin irritation.

**Chronic Health Hazard:** This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater. Repeated or prolonged contact causes sensitization, asthma and eczemas.

**Medical Conditions Generally Aggravated by Exposure:** Asthma, Chronic respiratory disease (e.g. Bronchitis, Emphysema), Eye disease, Skin disorders and Allergies.

**Carcinogens under OSHA, ACGIH, NTP, IARC:** This product contains no listed carcinogens in concentrations of 0.1 percent or greater. See section 8-EXPOSURE CONTROLS/PERSONAL PROTECTION for exposure limits and recommended protective equipment. See section 11-TOXICOLOGICAL INFORMATION for any further information.

### 4.3 Indication of immediate medical attention and special treatment needed, if necessary: N/A

## 5.0 FIRE-FIGHTING MEASURES

### 5.1 Suitable extinguishing media:

Small Fire: Use DRY chemical powder.

Large Fire: Use water spray, fog or foam. Do not use water jet.

### 5.2 Specific hazards arising from the chemical:

Flash Point is 339 °F (170.56 °C). Hazardous thermal (de)composition products: carbon oxides (CO, CO2), nitrogen oxides (NO, NO2...).

### 5.3 Special protective actions for fire-fighters:

Fire fighters should wear self-contained positive pressure breathing apparatus (SCBA) and full turnout gear. Be sure to use an approved/certified respirator or equivalent.

## 6.0 ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures:

Open enclosed spaces to outside atmosphere. Wear protective clothing, boots, gloves, and eye protection. At elevated temperatures a cartridge mask National Institute for Occupational Safety and Health (NIOSH) approved for ammonia may be appropriate.

### 6.2 Methods and materials for containment and clean up:

Stop the leak, if possible. Ventilate the space involved. Shut off or remove all ignition sources. Construct a dike to prevent spreading (includes molten liquids until they freeze).

Clean-Up Procedures: If recovery is not feasible, admix with dry soil, sand or non-reactive absorbent and place in an appropriate chemical waste container. Transfer to containers by suction, preparatory for later disposal. Place in metal containers for recovery or disposal. Neutralize residue with dilute solution of Acetic Acid.. Flush area with water

spray. Clean-up personnel must be equipped with self-contained breathing apparatus and butyl rubber protective clothing.

## 7.0 HANDLING AND STORAGE

**7.1 Precautions for safe handling:**

Avoid contact with skin or eyes. Avoid breathing of vapors. Handle in well-ventilated workspace. When handling, do not eat, drink, or smoke.

Other Precautions: Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations (e.g. OSHA). Do not use sodium nitrite or other nitrosating agents in formulations containing this product. Cancer-causing nitrosamines could be formed.

**7.2 Conditions for safe storage, including any incompatibilities:**

Keep away from acids and oxidizers. Keep in cool, dry, ventilated storage areas and in closed containers. Do not store in reactive metal containers.

## 8.0 EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1 Control parameters**

| Component | CAS No. | Percent | Exposure Limits | Source |
|---|---|---|---|---|
| Amorphous Silica | 7631-86-9 | <1% | 2.4 mg/m$^3$ TWA respirable dust, 10 mg/m$^3$ TWA total inhalable dust | OES/EH40 ACGIH |

**8.2 Appropriate engineering controls:**

No specific controls needed.

**8.3 Individual protection measures, such as personal protective equipment:**

**Eye Protection:** Chemical Safety Glasses with Side-Shields. A full-face shield and vapor respirator is recommended for operations involving spraying or other operations placing this material under pressurized conditions.

**Hand Protection:** Neoprene rubber gloves. Impermeable gloves. Cuffed butyl rubber gloves. Nitrile rubber gloves. Polyvinyl chloride gloves. Rubber Gloves. The breakthrough time of the selected glove(s) must be greater than the intended use period. The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all requisite workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), as well as the instructions/specifications provided by the glove supplier.

**Respiratory Protection:** An organic vapor respirator National Institute for Occupational Safety and Health (NIOSH) approved for organic vapors is recommended where local ventilation is not adequate. At elevated temperatures, a cartridge mask National Institute for Occupational Safety and Health (NIOSH) approved for ammonia may be appropriate.

**Protective Clothing:** Chemical resistant apron, coveralls and other impervious clothing. A full-face shield and vapor respirator is recommended for operations involving spraying or other broadcasting.

**Work and Hygienic Practices:** Provide readily accessible eye wash stations and safety showers. Wash at the end of each work shift and before eating, smoking or using the toilet. Promptly remove clothing that becomes contaminated.

## 9.0 PHYSICAL AND CHEMICAL PROPERTIES

**9.1 Appearance (physical state, color, etc.):** Thixotropic Paste, Yellow

**9.2 Odor:** Amine Odor

**9.3 Odor threshold:** N/A

**9.4 pH:** Basic

**9.5 Melting point/freezing point:** Not Determined

**9.6 Initial boiling point and boiling range:** Not Determined

**9.7 Flash Point:** 339 °F (170.56 °C)

**9.8 Evaporation rate:** N/A

**9.9 Flammability (solid, gas):** N/A

**9.10 Upper/lower flammability or explosive limits:** LFL-Not Determined; UFL-Not Determined

**9.11 Vapor pressure:** Not Determined

**9.12 Vapor Density:** N/A

**9.13 Relative density(Specific Gravity):** 0.62 – 0.66

**9.14 Solubility(ies):** Liquid Components are Soluble in Water (10%)

**9.15 Partition coefficient; n-octanol/water:** N/A

**9.16 Auto-ignition temperature:** Not Determined

**9.17 Decomposition temperature:** N/A

**9.18 Viscosity:** N/A

## 10.0 STABILITY AND REACTIVITY

**10.1 Reactivity:** N/A

**10.2 Chemical stability:** Stable under normal handling and storage conditions; see Section 7, Handling and Storage.

**10.3 Possibility of hazardous reactions:** Will not occur

**10.4 Conditions to avoid:** N/A

**10.5 Incompatible materials:** Mineral acids, Organic acids, Oxidizing Agents, Reactive metals, Sodium or Calcium Hypochlorite. CAUTION! N-Nitrosamines, many of which are known to be potent carcinogens, may be formed when the product comes in contact with nitrous acid, nitrites or atmospheres with high nitrous oxide concentrations. Product slowly corrodes copper, aluminum, zinc and galvanized surfaces. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion. Materials reactive with hydroxyl compounds. Nitrites, nitrosating agents. A reaction accompanied by large heat release occurs when the product is mixed with acids. Heat generated may be sufficient to cause vigorous boiling creating a hazard due to splashing or splattering of hot material.

**10.6 Hazardous decomposition products:** Nitrogen oxide can react with water vapors to form corrosive nitric acid (TLV=2 ppm). Carbon Monoxide in a fire. Carbon Dioxide in a fire. Ammonia when heated. Nitrogen Oxides in a fire. Irritating and toxic fumes at elevated temperatures. Nitric acid in a fire. Nitrosamines. The oxides of nitrogen gases (except nitrous oxide) emitted on decomposition are highly toxic.

## 11.0 TOXICOLOGICAL INFORMATION

**11.1 Likely routes of exposure:** Eye Contact, Skin Contact, Ingestion, Inhalation, Skin Absorption.

**11.2 Symptoms related to the physical, chemical and toxicological characteristics:**

**Ingestion:** This material should be considered toxic if ingested.
**Skin Contact:** This material should be considered moderately toxic if absorbed through the skin.
**Irritation:**
**Skin:** Causes severe irritation with pain, severe excess redness and swelling with chemical burns, blister formation, and possible tissue destruction. In addition, skin contact may result in other adverse health effects.
**Eyes:** This material is very hazardous in case of eye contact. This corrosive material will cause severe irritation and burns with corneal injury which may result in permanent impairment of vision, even blindness.
**Inhalation:** Vapors and mist, especially as generated from heating the material or as from exposure in poorly ventilated or confined spaces, are irritating and cause nasal discharge, coughing, and discomfort in nose and throat. Prolonged or repeated overexposure may result in lung damage.

**11.3 Delayed and immediate effects and also chronic effects from short and long term exposure:**

**Carcinogen:** This product contains no known or suspected human carcinogens in concentrations above 0.1%.
**Mutagen:** This Product contains no known or suspected human mutagens in concentrations above 0.1%.
**Reproductive Hazard:** This Product contains no known materials or materials suspected of causing human reproductive hazards.

**11.4 Numerical measures of toxicity:**

This finished product has not been tested to determine individual toxicological/ecological limits. Individual components of this mixture have been independently tested by the raw material manufacturers and any known results have been presented below. The results for the individual components may not be representative of the toxicity of this finished product.

| Ingredient Name | CAS No. | % | Test | Result | Route | Species |
|---|---|---|---|---|---|---|
| Propoxylated TETA | 26950-63-0 | 5% - 10% | LD 50<br>LD 50 | >2,000mg/kg<br>>2100mg/kg | Oral<br>Dermal | Rat<br>Rabbit |

## 12.0 ECOLOGICAL INFORMATION

**12.1 Ecotoxicity:**

No information available.

**12.2 Persistence and degradability**:

This material contains substances that show little to no evidence of biodegradability. Great care should be taken to prevent its release into the environment.

**12.3 Bioaccumulative potential:** N/A

**12.4 Mobility in soil:** N/A

**12.5 Other adverse effects:** N/A

## 13.0 DISPOSAL CONSIDERATIONS

**13.1 Disposal methods:**

Preferred method of disposal includes incineration under controlled conditions in accordance with all local and national laws and regulations. The generation of waste should be avoided or minimized wherever possible. Untreated material is not suitable for disposal. Waste, even small quantities, should never be poured down drains, sewers or watercourses. Waste must be disposed of in accordance with federal, state and local environmental control regulations. This material, when properly mixed and cured with its resin component at the proper mix ratio, may be safely landfilled.

Contaminated packaging: Empty containers can only be disposed of when the remaining product adhering to the container walls has been removed. Hazard warning labels should be removed from the container only after it has been properly emptied.

## 14.0 TRANSPORT INFORMATION

**14.1 UN number:** Not Regulated

**14.2 UN proper shipping name:** Liquid Plastic, NOI

**14.3 Transport hazard class(es):** Not Regulated

**14.4 Packing group, if applicable:** Not Regulated

**14.5 Environmental hazards:** N/A

**14.6 Transport in bulk:** N/A

**14.7 Special precautions for user:** N/A

## 15.0 REGULATORY INFORMATION

**15.1 Safety, health and environmental regulations:**

**Toxic Substances Control Act (TSCA):** All components are included in the EPA Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

**Toxic Substance Control Act (TSCA) 12(b) Component(s):** None

**OSHA Hazard Communication Standard (29CFR1910.1200) hazard class(es):** Irritant. Sensitizer.

**EPA SARA Title III Section 312 (40CFR370) hazard class:** Immediate Health Hazard. Delayed Health Hazard.

**EPA SARA Title III Section 313 (40CFR372) toxic chemicals above "de minimis" level are:** None

**CALIFORNIA PROPOSITION 65**: SUBSTANCES (component (s) know to the State of California to cause cancer and/or reproductive and subject to warning and discharge requirements under the "Safe Drinking Water and Toxic Enforcement Act of 1986") **NONE**

**New Jersey Trade Secret Registry Number(S):** None

**CANADA REGULATIONS**

**WHMIS Hazard Classifications:** D2B - skin sensitizer, E - corrosive to metal or skin (Toxic Material Causing Other Toxic Effects)

**WHMIS Ingredient Disclosure List:** None

**WHMIS Trade Secret Registry Number(s):** None

**WHMIS SYMBOLS**

**DSL:** Components of this product have been reported to Environment Canada in accordance with subsection 25 of the Canadian Environmental Protection Act and are included on the Domestic Substances List.

## 16.0 OTHER INFORMATION

**16.1 Date of Preparation:** 09/19/2011

To the best of our knowledge, the information contained herein is accurate. Final determination of the suitability of any material is the sole responsibility of the users. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.