



ADVANCED  
CHEMICAL  
TECHNOLOGIES, Inc.

**SIL-ACT® Ep-700 D Part A  
(Resin)**

**Material Safety Data Sheet**

Version 2.3  
Effective Date 07/30/2008  
According to OSHA Hazard Communication Standard,  
29 CFR 1910.1200

**1. MATERIAL AND COMPANY IDENTIFICATION**

**Material Name** SIL-ACT® Ep-700 D Part A  
**Use s** Epoxy resin  
**Company** **Advanced Chemical Technologies, Inc.**  
100 West Wilshire Blvd., Suite C-1  
Oklahoma City, Oklahoma 73116  
**MSDS Request** 1-800-535-0433  
**Emergency Telephone Number**  
**ChemTel, Inc.** 1-800-255-3924

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

<b>Chemical</b>	<b>CAS No.</b>	<b>Concentration</b>
Bisphenol A Diglycidyl Ether Polymer	25068-38-6	60-90 %W
Oxirane, mono[(C12-14-alkyloxy)methyl] derivatives	68609-97-2	10-40 %W

**3. HAZARDS IDENTIFICATION**

<b>WARNING</b>	<b>Warning Statement</b> CAN CAUSE SKIN AND EYE IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION.
----------------	---

**Emergency Overview**  
**Appearance and** Colorless to light yellow.  
Liquid.  
**Health Hazards** Primary route of entry: Dermal

**4. FIRST AID MEASURES**

**General Information** Get immediate medical attention. Contact a poison control center.  
**Inhalation** Remove to fresh air. Seek immediate medical attention.  
**Skin Contact** Immediately wash with soap and large amounts of water for at least 15 minutes. Remove contaminated clothing and launder before reuse. Remove and destroy contaminated shoes. Seek immediate medical attention.  
**Eye Contact** Immediately flush eyes with water for at least 15 minutes. Seek immediate medical attention.  
**Ingestion** Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Seek immediate medical attention.  
**Comment** Promptly remove wet contaminated non-impervious clothing. Launder before reuse.

---

**5. FIRE FIGHTING MEASURES**

Clear fire area of all non-emergency personnel.

<b>Flash point</b>	> 93 °C / > 200 °F (TCC)
<b>Specific Hazards</b>	Carbon monoxide may be evolved if incomplete combustion occurs.
<b>Extinguishing Media</b>	Carbon dioxide, foam, water spray or fog.
<b>Protective Equipment for Firefighters</b>	Wear full protective clothing and self-contained breathing apparatus.
<b>Additional Advice</b>	Keep adjacent containers cool by spraying with water. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products.

---

**6. ACCIDENTAL RELEASE MEASURES**

Observe all relevant local and international regulations. Ventilate area. Avoid breathing vapor.

<b>Protective measures</b>	Avoid contact with spilled or released material. Immediately remove all contaminated clothing. Shut off leaks, if possible without personal risks. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. Take up with absorbent material.
----------------------------	---

---

**7. HANDLING AND STORAGE**

<b>General Precautions</b>	Can cause skin irritation, eye irritation, and allergic skin reaction. Avoid contact.
<b>Storage</b>	Store in sealed containers. Keep containers closed to prevent moisture absorption and contamination.
<b>Product Transfer</b>	Keep containers closed when not in use. Do not use compressed air for filling, discharging or handling.
<b>Recommended Materials</b>	For containers, or container linings use mild steel, stainless steel. For container paints, use epoxy paint, zinc silicate paint.
<b>Container Advice</b>	Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers.

---

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Occupational Exposure Limits**

<b>Exposure Controls</b>	The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits. Eye washes and showers for emergency use. Wash hands before eating, drinking, smoking and using the toilet.
--------------------------	--

<b>Personal Protective Equipment</b>	Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.
<b>Respiratory Protection</b>	Ensure adequate ventilation
<b>Hand Protection</b>	Wear impervious gloves.
<b>Eye Protection</b>	Chemical splash goggles (chemical goggles).
<b>Protective Clothing</b>	Use protective clothing which is chemical resistant to this material. Safety shoes and boots should also be chemical resistant.

---

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colorless to light yellow.
Odor	Mild chemical odor
Boiling point	Greater than 200 °C / 392 °F
Flash point	> 83 °C / > 200 °F TCC
Vapor Density (Air = 1)	> 1
pH	Not determined
Vapor pressure	Not determined
Specific gravity	1.10 at 20 °C / 68 °F
Water solubility	Insoluble
Volatile organic carbon content	none
Evaporation rate (nBuAc=1)	< 1.0 (ASTM D 3539, n-BuAc=1)
Viscosity	2100-2200 cP at 20 °C

---

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under normal conditions of use.
<b>Conditions to Avoid</b>	Avoid heat, sparks, open flames and other ignition sources.
<b>Materials to Avoid</b>	Strong oxidizing agents
<b>Hazardous Decomposition Products</b>	Thermal decomposition is highly dependent on conditions. A complex mixture including carbon monoxide, carbon dioxide, aldehydes and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.
<b>Hazardous Polymerization</b>	Will not occur

---

## 11. TOXICOLOGICAL INFORMATION

Special Hazard Information on Components

**Acute Oral Effects (LD50):** (Rat) >5,000 mg/kg

**Acute Dermal Toxicity (LD50):** (Rabbit) > 6,000 mg/kg

**Sensitization:** Possible in susceptible individuals.

**Skin Irritation:** (Rabbit) Moderate irritation.

**Eye Irritation:** (Rabbit) Slight irritation.

**Teratogenicity:** (Rat, Rabbit) No adverse effects on embryonic or fetal development were observed.

### Mutagenicity:

Ames Tests: both positive and negative results

Hamster Bone Marrow Cytogenetics (in vivo): negative

Mouse Spermatocytes Cytogenetics (in vivo): negative

Micronucleus Test (in vivo): negative

Mouse Dominant Lethal Test: negative

Alkylation of DNA: positive

Human Mononucleated WBC (in vitro): negative

Host Mediated Assay: negative

**Sub-Chronic:** (Rat) No observable effect at highest level studied (1000 mg/kg/day for 28 days) in oral feeding study.

**Chronic Skin Exposure Effects:**

2-Year Dermal Study in mice: no treatment related effects.

**2-Year Skin Painting Studies:** (A) C3HF/BD Mice: no increased tumor incidence. (B) C57BL/6BD Mice: slight increase in epidermal localized carcinomas at high dose. (C) C3H Mice: no tumors.

**12. ECOLOGICAL INFORMATION**

**Biodegradability:** (Modified Sturm method): ~12%

**Fish Toxicity:** Rainbow trout (96hr): LC50 1.5 mg/L, Zebra Fish (96 hr): LC50 2.4 mg/L

**Invertebrate Toxicity:** Daphnia Toxicity (24 hr): EC50 3.6 mg/L

**13. DISPOSAL CONSIDERATIONS**

<b>Material Disposal</b>	Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations.
<b>Container Disposal</b>	Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums. Send to drum recycler or metal reclaimer.
<b>Local Legislation</b>	Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied with.

**14. TRANSPORT INFORMATION**

DOT road shipment information (49 CFR 172.01)

Not regulated as hazardous material by the U.S. Dept. of Transportation (DOT) 49 CFR 172.101 hazardous material table

**15. REGULATORY INFORMATION****Notification Status**

Bisphenol A Diglycidal Ether polymer (25068-38-66)

DSL	Listed		<b>Notification Status Legend</b>
TSCA	Listed		Substances; DSL = Canadian Domestic
EINECS	Listed	500-033-5	Substances List. TSCA = Toxic Substance
WHMIS	Listed	Class D: Div 2, Subdiv B; Irritant Class E: Corrosive	Control Act; EINECS = European Inventory of New and Existing Chemicals; WHMIS = Canadian Workplace Hazardous Materials Information System

Oxirane, mono[(C12-14-alkyloxy)methyl] derivatives (68609-97-2)

DSL	Listed		<b>Notification Status Legend</b>
TSCA	Listed		See above
EINECS	Listed	271-846-8	

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

#### Part A. Federal Regulatory Status

TSCA (8b) Status: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

TSCA (12b) Status: This product does not contain any substances that are subject to 12b export notification.

EPA SARA Title III Chemical Listings

Section 302 Extremely Hazardous Substances: not listed

Section 304 CERCLA Hazardous Substances: not listed

Section 313 Toxic Chemicals: not listed

**Resource Conservation and Recovery Act (RCRA):** Not a hazardous waste under RCRA (40 CFR 261).

#### Part B. State Regulatory Status

##### *California*

This product contains no chemical(s) listed by the State of California under the list of Known Carcinogens and Reproductive Toxins.

##### *New Jersey and Pennsylvania*

Component	CAS Reg. Number	Percentage
Bisphenol A Diglycidyl Ether Polymer	25068-38-6	60 - 90
Oxirane, mono[(C12-14-alkyloxy)methyl derivatives	68609-97-2	10 - 40

Comment: Not listed on NJ and PA Hazardous Substances Lists.

#### 16. OTHER INFORMATION

**HMIS Rating (Health, Fire, Reactivity)** 2, 1, 0

**NFPA Rating (Health, Fire, Reactivity)** 2, 1, 0

**Disclaimer**

The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. No warranty or guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product. The information is not presented as a material specification.