

## EPOTEC YD 535

### 1. IDENTIFICATION OF SUBSTANCE

**Trade Name:** EPOTEC YD 535

**Manufacturer/Supplier:** Aditya Birla Chemicals (Epoxy Division) 16<sup>th</sup> Floor Mahathun Plaza Building, 888/160 - 161 Pleonchit Road, Lumpini, Pathumwan, Bangkok 10330 Thailand.

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### 2. COMPOSITIONS AND INFORMATION ON INGREDIENTS

| Component   | CAS Number  | %    |
|---|-------------|------|
| Reaction product of epichlorohydrin and bisphenol-A | 025085-99-8 | > 90 |
| Epoxydised reaction product                         | 16096-31-4  | < 30 |

### 3. HAZARD IDENTIFICATION

**Eye:** May cause slight transient (temporary) eye irritation. Corneal injury is unlikely.

**Skin:** Has caused allergic skin reactions in humans. Prolonged exposure not likely to cause significant skin irritation. Repeated exposure may cause skin irritation. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.

**Ingestion:** Single does oral toxicity is considered to be extremely low. No hazards anticipated from swallowing small amount incidental to normal handling operations.

**Inhalation:** At room temperature, vapors are minimal due to physical properties.

### 4. FIRST AID

**Eye:** Flush eyes with plenty of water.

**Skin:** Wash off in flowing water or shower.

**Ingestion:** No adverse effects anticipated by this route of exposure incidental to proper industrial handling.

**Inhalation:** Remove to fresh air if effects occur. Consult a physician.

**Note to Physician:** No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

### 5. FIRE FIGHTING MEASURES

**Flammable Properties:** Flash point 351 °F, 177°C

Autoignition temperature Not applicable

**Flammability Limits:** LFL Not applicable

UFL Not applicable

**Hazardous Combustion Products:** Under fire conditions polymers decompose. The smoke may contain polymer fragments of varying compositions in addition to unidentified toxic and/or irritating compounds. Hazardous combustion products may include and are not limited to phenolics, carbon monoxide, carbon dioxide and water.

**Other Flammability Information:** Dense smoke is emitted when burned without sufficient oxygen. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Flammable mixtures may exist within the vapor space of containers at room temperature.

**Fire Fighting Instructions:** Keep people away. Isolate fire area and deny unnecessary entry. Flushing with water to protect personnel and minimize property damage may move burning liquids. Water fog, applied gently may be used as a blanket for fire extinguishments. Do not use direct water stream. May spread fire. Water may not be effective in extinguishing fire. Move container from fire area if this is possible without hazard.

**Protective Equipments for Fire Fighting:** Wear positive pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (include fire fighting helmet, coat, pants, boots and gloves) Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistance clothing with SCBA. This will not provide sufficient fire

protection, considering fighting fire from a remote location. For protective equipment in post-fire or non-fire cleanup situations, refer to the relevant sections.

## 6. ACCIDENTAL RELEASE MEASURES

**Protect People:** Keep unnecessary people away: Isolate hazard area and deny unnecessary entry. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. For large spills, warn public of downwind explosion hazard. Check area with explosion meter before reentering area. Ground and bond all containers and handling equipment.

**Protect the Environment:** Contain material to prevent contamination of soil, surface water or ground water. Keep out of ditches, sewers and water supplies.

**Cleanup:** For small spills: absorb with material such as sand or polypropylene or polyethylene fiber products. Place in properly labeled dry sealable containers. Remove residual using hot soapy water. Residual resin can be removed with solvent. Solvents are not recommended for cleanup unless the recommended exposure guidelines and safe handling practices for the specific solvent are followed. Consult appropriate solvent MSDS for handling information and exposure guidelines. For large spills: dike and pump into suitable and properly labeled containers.

## 7. HANDLING AND STORAGE

**Handling:** Avoid contact with eyes, skin and clothing. Avoid breathing vapors. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld or perform similar operations on or near empty containers. No smoking, open flames or sources of ignition in handling and storage area. Electrically ground all equipment.

**Storage:** Minimize sources of ignition, such as static buildup, heat, spark or flame. Keep containers tightly closed when not in use. Store below 140°F (60°C).

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**Exposure Guideline(s):** None established.

**Engineering Controls:** Good general ventilation should be sufficient for most conditions.

**Eye Protection:** Use safety glasses.

**Skin Protection:** Use protective clothing impervious to this material. Selection of specific items such as face shields, gloves, boots, apron, or full-body suit will depend on operation. Remove contaminated clothing immediately, wash skin with soap and water, and launder clothing before reuse.

**Respiratory Protection:** No respiratory protection should be needed. If respiratory irritation is experienced, use an approved air-purifying respirator.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|                             |                        |
|-----------------------------|------------------------|
| <b>Appearance:</b>          | Light yellowish liquid |
| <b>Odor:</b>                | Mild epoxy             |
| <b>Boiling Point:</b>       | > 233 °C               |
| <b>Vapor Pressure:</b>      | 1 mm of Hg at 20 °C    |
| <b>Vapor Density:</b>       | Not applicable         |
| <b>Solubility in Water:</b> | none                   |
| <b>Specific Gravity:</b>    | 1.1 - 1.2              |

## 10. STABILITY AND REACTIVITY

**Stability:** Stable under recommended storage conditions.

**Conditions to Avoid:** Avoid temperature above 140 °F. Product can decompose at elevated temperature.

**Material to Avoid:** Acids, bases, amines and oxidizing agents.

**Hazardous Decomposition Products:** Refer to section 5 for Hazardous Combustion Products.

**Hazardous Polymerization:** Will not occur by itself. Masses of more than one pound (0.5 kg) of product plus an aliphatic amine will cause irreversible polymerization with considerable heat build up.

## 11. TOXICOLOGICAL INFORMATION

|   |              |
|---|--------------|
| <b>Acute Oral Toxicity (LD50/Rat):</b>      | > 1410 mg/kg |
| <b>Acute Dermal Toxicity (LD50/Rabbit):</b> | > 2150 mg/kg |

**12. ECOLOGICAL INFORMATION**

**Degradation:** No relevant information found.  
**Ecotoxicity:** No relevant information found.

**13. DISPOSAL CONSIDERATIONS**

**Disposal:** Do not dump into any sewers, on the ground, or into any body of water. All disposal methods must be in compliance with all applicable federal, state/provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

**14. TRANSPORT INFORMATION**

**U.S. Department of Transportation:** For DOT regulatory information, if required, consults transportation regulations.

**Canadian TDG Information:** For TDG regulatory information, if required, consults transportation regulations.

**15. REGULATORY INFORMATION**

**Notice:** The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial and local laws and regulations.

**U.S. Regulations:**

**SARA 313 INFORMATION:** To the best of our knowledge, this product Contains no chemical subject to SARA Title III Section 313 supplier Notification requirements.

**SARA HAZARD CATEGORY:** This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories: An immediate health hazard

**TOXIC SUBSTANCES CONTROL ACT (TSCA):** All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory. This product contains a chemical that requires TSCA export notification. The chemical(s) is (are): alkyl glycidyl ether.

**OSHA HAZARD COMMUNICATION STANDARD:** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**CANADIAN REGULATIONS**

**WHMIS INFORMATION:** The Canadian Workplace Hazardous Materials Information System (WHMIS) Classification for this product is: D2B - skin sensitizer

Refer elsewhere in the MSDS for specific warnings and safe handling information.

**CPR STATEMENT:** This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**HAZARDOUS PRODUCTS ACT INFORMATION:** This product contains the following ingredients which are Controlled Products and/or on the Ingredient Disclosure List (Canadian HPA section 13 and 14):

| COMPONENTS:   | CAS #       | AMOUNT (%w/w) |
|---|-------------|---------------|
| Reaction product of epichlorohydrin and Bisphenol-A | 025085-99-8 | > 90%         |
| Epoxydised reaction product                         | 16096-31-4  | < 30%         |

**CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA):** All substances in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

**16. OTHER INFORMATION**

The information presented herein is based on data considered to be accurate as of date of preparation of the Material Safety Data Sheet. However, no warranty or representation, express or implied, is made as to the accuracy or completeness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. In addition, no responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product.