1 Identification

· **Product identifier**
  - Trade name: EPOTEC YDF 172LV
  - CAS Number: 28064-14-4

· **Relevant identified uses of the substance or mixture and uses advised against**
  - No further relevant information available.

· **Application of the substance / the mixture**
  - Resin for coating, composite, civil, electrical, adhesive systems

· **Details of the supplier of the safety data sheet**
  - Manufacturer/Supplier:
    Aditya Birla Chemicals (Thailand) Ltd. (Epoxy Division)
    No.2, I-5 Road, Maptaphut Industrial Estate, Maptaphut,
    Muang, Rayong 21150
    THAILAND

  - Information department:
    epoxymktg@adityabirla.com
    www.adityabirlachemicals.com
    www.epotec.info

  - **Emergency telephone number:**
    During normal opening times: +66-38-685233
    Fax (Factory): +66-38-683982

2 Hazard(s) identification

· **Classification of the substance or mixture**
  - GHS09 Environment
    Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

  - GHS07
    Skin Irrit. 2 H315 Causes skin irritation.
    Eye Irrit. 2A H319 Causes serious eye irritation.
    Skin Sens. 1 H317 May cause an allergic skin reaction.

· **Label elements**
  - **GHS label elements**
    The substance is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**
  - GHS07 GHS09

· **Signal word** Warning

· **Hazard statements**
  - Causes skin irritation.
  - Causes serious eye irritation.
  - May cause an allergic skin reaction.
  - Toxic to aquatic life with long lasting effects.
Trade name: EPOTEC YDF 172LV

· Precautionary statements
  Avoid breathing dust/fume/gas/mist/vapors/spray
  Wash thoroughly after handling.
  Contaminated work clothing must not be allowed out of the workplace.
  Wear protective gloves.
  Wear eye protection / face protection.
  Avoid release to the environment.
  If on skin: Wash with plenty of water.
  If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
  Continue rinsing.
  If skin irritation or rash occurs: Get medical advice/attention.
  If eye irritation persists: Get medical advice/attention.
  Specific treatment (see on this label).
  Wash contaminated clothing before reuse.
  Collect spillage.
  Take off contaminated clothing and wash it before reuse.
  Dispose of contents/container in accordance with local/regional/national/international regulations.

· Classification system:
  · NFPA ratings (scale 0 - 4)
    - Health = 1
    - Fire = 1
    - Reactivity = 0
  · HMIS-ratings (scale 0 - 4)
    - Health = 1
    - Fire = 1
    - Reactivity = 0
  · Other hazards
    The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

3 Composition/information on ingredients

· Chemical characterization: Substances
· CAS No. Description
  28064-14-4 Reaction product: Bisphenol-F- (epichlorohydrin); epoxy resin
· Identification number(s) EC No. -
· Additional information: 100 %

4 First-aid measures

· Description of first aid measures
  · After inhalation: Supply fresh air and to be sure call for a doctor.
  · After skin contact: Immediately wash with water and soap and rinse thoroughly.
  · After eye contact:
    Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
  · After swallowing: Do not induce vomiting; immediately call for medical help.
· Information for doctor:
  · Most important symptoms and effects, both acute and delayed No further relevant information available.
5 Fire-fighting measures

- Extinguishing media
  - Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture
  Formation of toxic gases is possible during heating or in case of fire.
- Advice for firefighters
- Protective equipment: Wear self-contained respiratory protective device.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions:
  Prevent seepage into sewage system, workpits and cellars. Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter sewers/surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Clean the affected area carefully; suitable cleaners are: Warm water
- Reference to other sections
  See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

7 Handling and storage

- Handling:
- Precautions for safe handling Ensure good ventilation/exhaustion at the workplace.
- Information about protection against explosions and fires: Protect from heat.
- Conditions for safe storage, including any incompatibilities
- Storage:
  - Requirements to be met by storerooms and receptacles: Provide ventilation for receptacles. Store in a cool location.
  - Information about storage in one common storage facility: Not required.
- Further information about storage conditions:
  Keep receptacle tightly sealed. Store receptacle in a well ventilated area.
- Specific end use(s) No further relevant information available.
8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
- Control parameters
- Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.

- Exposure controls
- Personal protective equipment:
  - Breathing equipment: Not necessary if room is well-ventilated.
  - Protection of hands:
    - Protective gloves
      The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
    - Material of gloves
      The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
    - Penetration time of glove material
      The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
    - Eye protection:
      - Safety glasses
        Tightly sealed goggles
  - Body protection:
    - Boots
    - Protective work clothing

9 Physical and chemical properties

- Information on basic physical and chemical properties
  - General Information
    - Appearance:
      - Form: Liquid
      - Color: Light yellow
      - Odor: Mild
  - Change in condition
    - Melting point/Melting range: Undetermined.
    - Boiling point/Boiling range: > 200 °C (> 392 °F)
  - Flash point: > 150 °C (> 302 °F)
  - Danger of explosion: Not applicable.
  - Vapor pressure at 20 °C (68 °F): 0.82 hPa (1 mm Hg)
  - Density at 25 °C (77 °F): 1.17 g/cm³ (9.764 lbs/gal)

(Contd. of page 5)
Trade name: EPOTEC YDF 172LV

- Solubility in / Miscibility with
  - Water: Insoluble.
  - Other information: No further relevant information available.

* 10 Stability and reactivity

- Reactivity: No further relevant information available.
- Chemical stability
- Thermal decomposition / conditions to be avoided:
  No decomposition if used and stored according to specifications.
- Possibility of hazardous reactions
  Reacts with acids, alkalis and oxidizing agents.
  Reacts with amines.
- Conditions to avoid: No further relevant information available.
- Incompatible materials:
  - Acids, bases and amines.
  - Acids, bases, amines and oxidizing agent.
- Hazardous decomposition products: Carbon monoxide and carbon dioxide

* 11 Toxicological information

- Information on toxicological effects
- Acute toxicity:
  - LD/LC50 values that are relevant for classification:
    28064-14-4 Reaction product: Bisphenol-F (epichlorohydrin); epoxy resin
    Oral LD50 > 2000 mg/kg (rat)
    Dermal LD50 > 2000 mg/kg (rabbit)
- Primary irritant effect:
  - on the skin: Irritant to skin and mucous membranes.
  - on the eye: Irritating effect.
  - Sensitization: Sensitization possible through skin contact.
- Additional toxicological information:
- Carcinogenic categories
  - IARC (International Agency for Research on Cancer)
    Substance is not listed.
  - NTP (National Toxicology Program)
    Substance is not listed.
  - OSHA-Ca (Occupational Safety & Health Administration)
    Substance is not listed.

* 12 Ecological information

- Toxicity
- Aquatic toxicity: No further relevant information available.
13 Disposal considerations

- **Waste treatment methods**
  - **Recommendation:**
    Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packagings:**
  - **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
  - DOT: Void
  - ADR, IMDG, IATA: UN3082

- **UN proper shipping name**
  - DOT: Void
  - ADR: 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Reaction product: Bisphenol-F- (epichlorohydrin); epoxy resin)
  - IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Reaction product: Bisphenol-F- (epichlorohydrin); epoxy resin)
  - IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Reaction product: Bisphenol-F- (epichlorohydrin); epoxy resin)

- **Transport hazard class(es)**
  - DOT: Void
  - Class: 9 Miscellaneous dangerous substances and articles

- **Packing group**
  - DOT: Void
  - ADR, IMDG, IATA: III

- **Environmental hazards:**
  - Marine pollutant: Yes

- **Special precautions for user**
  - **Warning:** Miscellaneous dangerous substances and articles
  - Danger code (Kemler): 90

(Contd. of page 7)
15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

- Section 313 (Specific toxic chemical listings):
  Substance is not listed.

- TSCA (Toxic Substances Control Act):
  Substance is listed.

- GHS label elements
  The substance is classified and labeled according to the Globally Harmonized System (GHS).

- Hazard pictograms
  ![GHS07](image1) ![GHS09](image2)

- Signal word Warning

- Hazard statements
  Causes skin irritation.
  Causes serious eye irritation.
  May cause an allergic skin reaction.
  Toxic to aquatic life with long lasting effects.

- Precautionary statements
  Avoid breathing dust/fume/gas/mist/vapors/spray
  Wash thoroughly after handling.
  Contaminated work clothing must not be allowed out of the workplace.
  Wear protective gloves.
  Wear eye protection / face protection.
  Avoid release to the environment.
  If on skin: Wash with plenty of water.
  If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  If skin irritation or rash occurs: Get medical advice/attention.
  If eye irritation persists: Get medical advice/attention.
  Specific treatment (see on this label).
  Wash contaminated clothing before reuse.
  Collect spillage.
  Take off contaminated clothing and wash it before reuse.
  Dispose of contents/container in accordance with local/regional/national/international regulations.

- National regulations:

- Other regulations, limitations and prohibitive regulations
  Reaction Product: Bisphenol F-(epichlorohydrin); epoxy resin can also be described by the CAS No. 9003-36-5
Trade name: EPOTEC YDF 172LV

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Date of preparation / last revision 07/03/2015 / -

· Abbreviations and acronyms:
  RID: Reglement internationale concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
  IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association“ (IATA)
  ICAO: International Civil Aviation Organisation
  ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation“ (ICAO)
  ADR: Accord européen sur le transport des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  IMDG: International Maritime Code for Dangerous Goods
  DOT: US Department of Transportation
  IATA: International Air Transport Association
  EINECS: European Inventory of Existing Commercial Chemical Substances
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  NFPA: National Fire Protection Association (USA)
  HMIS: Hazardous Materials Identification System (USA)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
  Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
  Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
  Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2