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Material Safety Data Sheet
Epoxy Resin

Section 1 - Product Identification

Synonym	:	Epoxy Resin.
Chemical Formula	:	$C_{21}H_{25}ClO_5$
Company Identification	:	Tradeasia International Pte. Limited
Address	:	133 Cecil Street # 12-03 Keck Seng Tower, Singapore Tel: +65-6227 6365 Fax: +65-6225 6286 Email: contact@chemtradeasia.com

Section 2 – Hazards Identification

2.1. Classification
Skin corrosion/irritation, Category 2
Skin sensitizer, Category 1
Eye damage/irritation, Category 2A
Chronic aquatic toxicity, Category 2

2.2. Label elements
Symbols/Pictograms

Signal Word
Warning
Hazard Statements
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H411: Toxic to aquatic life with long lasting effects.
Precautionary Statements
Prevention
P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
P264: Wash hands thoroughly after handling.
P272: Contaminated work clothing should not be allowed out of the workplace.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection.
Response
P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313: If skin irritation or rash occurs: Get medical attention/advice.
P337 + P313: If eye irritation persists: Get medical attention/advice.
P362 + P364: Take off contaminated clothing and wash it before reuse.
P391: Collect spillage.

Disposal
P501: Dispose of contents/container in accordance with local, regional and international regulations.

2.3. Other hazards
Not applicable

Section 3 – Composition/Information on Ingredients

3.1 Composition comments

Chemical Name	EC No/CAS No	Purity, %
Epoxy Resin	61788-97-4	max. 99.9

Section 4 – First-Aid Measures

4.1. Description of first aid measures
Eyes
Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
Skin
DO NOT DELAY Remove all contaminated clothes and footwear immediately unless stuck to skin. Drench the affected skin with running water for 10 minutes or longer if the substance is still on the skin. Transfer to hospital if there are burns or symptoms of poisoning.
Ingestion
DO NOT induce vomiting. If conscious, give 1 glass of water to drink immediately. If unconscious and breathing is OK, place in the recovery position. Transfer to hospital as soon as possible.
Inhalation
No specific measures.

4.2. Most important symptoms and effects, both acute and delayed
N.A.

4.3. Indication of any immediate medical attention and special treatment needed
N.A.

Section 5 – Fire Fighting Measures

5.1. Suitable Extinguishing media
Foam. Water spray or fog.

5.2. Unsuitable Extinguishing media
Water jet.

5.3. Specific hazards arising from the chemical
Carbon monoxide may be released if a complete combustion occurs.

5.4. Special protective actions for fire-fighters

Do not enter a fire area without proper protection. Respiratory protection equipment may be necessary. Exercise caution when fighting any chemical fire. Avoid fire fighting water to enter the environment.

Section 6 – Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures
Equip cleanup crew with proper protection. Respiratory protection equipment may be necessary.

6.2. Environmental precautions
Contain spillage using bunding. Do not discharge into drains or rivers. Do not contaminate surface water – avoid subsoil penetration. If material enters drains it should be pumped out into an open vessel, emergency services should be called to assist in this operation.

6.3. Methods and material for containment and cleaning up
Absorb into dry earth or sand, transfer to a closable, labeled container for disposal by appropriate method. Scrub contaminated waste. Put leaking containers in a labeled drum.

Section 7 – Handling and Storage

7.1. Precautions for safe Handling
Both local exhaust and general room ventilation are usually required. Handle in accordance with good industrial hygiene and safety procedures. Ensure prompt removal from skin, eyes and clothing. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Palletised loads should be stacked to a maximum of 4 high.

7.2. Conditions for safe storage, including any incompatibilities
Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 – Exposure Controls/Personal Protection

8.1. Individual protection measures, such as personal protective equipment (PPE)
Eye/face protection
Safety glasses and a suitable eyewash station nearby.
Skin protection
Protective gloves.
Respiratory protection
No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation.
Ingestion
When handling, do not eat, drink or smoke.

Section 9 – Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State: Liquid
Appearance: Translucent to pale yellow
Odor: Perceptible odour

Autoignition temperature: ca. 400ºC
Vapor Pressure: <0.1 mbar @ 20ºC
Viscosity: 0.7 – 1.1 Pa.s: 25ºC ASTM D-445
Boiling Point: 150ºC
Flash point: >150ºC
Solubility: 11.6 mg/l @ 20ºC (water)
Relative Density: 1.12kg/m³ @ 20ºC

Section 10 – Stability and Reactivity

10.1. Reactivity
Stable under normal conditions.

10.2. Chemical stability
Stable under normal temperatures and pressures.

10.3. Possibility of hazardous reactions
Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

10.4. Conditions to avoid:
Caustic soda can induce vigorous polymerization at temperatures around 200ºC.

10.5. Incompatible materials
Strong oxidizing agents.

10.6. Hazardous decomposition products
Hazardous decomposition products are not expected to form during normal storage. Polymerises exothermically with amines, mercaptans and Lewis acids at ambient temperature and above. Polymerises in contact with caustic soda. Reacts exothermically with bases, ammonia, primary and secondary amines, alcohols and acids.

Section 11 – Toxicological Information

11.1 Health effects associated with ingredients
Skin corrosion/irritation
Causes skin irritation.
Serious eye damage/eye irritation
Causes serious eye irritation.
Respiratory or skin sensitization
Not classified.
Germ cell mutagenicity
Not classified.
Carcinogenicity
Not classified.
Reproductive toxicity
Not classified.
Specific target organ toxicity - single exposure
Not classified.

Specific target organ toxicity - repeated exposure
Not classified.
Aspiration hazard
Not classified.

Section 12 – Ecological Information

12.1.Ecotoxicity
No specific test data available for the mixture.

12.2. Bioaccumulative potential
No specific test data available for the mixture.

12.3. Mobility in soil
No specific test data available for the mixture.

12.4. Persistence and Degradability
No specific test data available for the mixture.

12.5. Other adverse effects
In the liquid, uncured state, this product may be harmful to aquatic life long lasting effects. Prevent release to the environment, sewers and natural waters.

Section 13 – Disposal Considerations

13.1. Disposal methods
Evaluation of this product using RCRA criteria shows that it is not a hazardous waste, either by listing or characteristics, in its purchased form. It is the responsibility of the user to determine proper disposal methods. Incinerate, recycle (fuel blending) or reclaim may be preferred methods when conducted in accordance with federal, state and local regulations.

Section 14 – Transport Information

14.1. US DOT
Not regulated.

14.2. Canada TDG
Not regulated.

14.3. IMDG

UN number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing Group	III
EmS Number	F-A, S-F
Marine pollutant	Yes

14.4. IATA

UN number	UN3082

UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing Group	III
Marine pollutant	Yes

Section 15 – Regulatory Information

15.1. Safety, health and environmental regulations
United States TSCA: All ingredients are listed or otherwise compliant.
Europe EINECS or ELINCS: All ingredients are listed or otherwise compliant.
Canada CEPA (DSL/NDSL): All ingredients are listed or otherwise compliant.
Australia AICS: All ingredients are listed or otherwise compliant.
Japan ENCS: All ingredients are listed or otherwise compliant.
South Korea KECI: All ingredients are listed or otherwise compliant.
China IECSC: All ingredients are listed or otherwise compliant.
Philippines PICCS: All ingredients are listed or otherwise compliant.

Section 16 : Additional Information

16.1. List of abbreviation and acronyms used in this MSDS
SDS : Safety Data Sheets
Index N° : atomic number of the element most characteristic of the properties of the substance
CAS No : Chemical Abstracts Service number
EC No : EINECS Number : European Inventory of Existing Commercial Substances
Repr. Cat. 2 : Substance presumed human reproductive toxicant
Acute Oral Cat. 5 : Substance which is of relatively low acute oral toxicity.
GHS : Globally Harmonised System of Classification and Labelling
LD_{50} : Median Lethal Dose
LC_{50} : Lethal Concentration, 50%
N.A. : Not Applicable
OSHA : Occupational Safety & Health Administration
Cal OSHA : The State of California Division of Occupational Safety and Health (DOSH)
PEL : Permissible Exposure Limits
ACGIH : American Conference of Governmental Industrial Hygienists
TLV : Threshold Limit Value
Japanese MITI : Japanese Ministry of International Trade and Industry
EC_{50} : Half maximal effective concentration
UN : United Nations
U.S. EPA TSCA Inventory: Inventory of the chemical substances manufactured or processed in the United States according to Toxic Substances Control Act compiled and published under the autority of the Environmental Protection Agency
Canadian DSL: Canadian Domestic Substances List

16.2. List of relevant hazard statements and precautionary statements used in this MSDS
Hazard Statement
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
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Precautionary Statements

Prevention

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16.3. Disclaimer of Liability

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