



Safety Data Sheet

Section 1 - Identification of the Substance/Mixture and of the Company

Date of SDS Revision: February 25, 2016

1.1 Product identifier

Product Name: EC 394 PART "B"

Description: Cycloaliphatic Amine Curing Agent

Manufacturer/Supplier: EPOXY-COAT INC.

1.2 Relevant identified uses of the preparation and uses identified against

Use: Hardener for epoxy coatings

For professional/industrial use only.

1.3 Details of the supplier of the safety data sheet

EPOXY-COAT INC..

169 North Gratiot Ave.

Mt. Clemens, MI 48043

Toll Free: 1-800-841- 5580

Fax: 1-586-468-8440

Emergency telephone number

Chemtrec PH #: 800-262-8200

Emergency #: 800-424-9300

Contract #: 627513

Chemtrec Customer #: CCN 627513

1.4

Section 2 - Hazards Identification

2.1 Classification of the substance/mixture

2.1.1 Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Acute oral toxicity cat. 4 H302

Acute dermal toxicity cat. 4 H312

Skin corrosion cat. 1A H314

Skin sensitization cat. 1 H317

Acute toxicity/inhalation cat. 4 H332

Aquatic toxicity, acute cat. 2 H401

Aquatic toxicity, chronic cat. 2 H411

2.2 Labeling elements

2.2.1 Labeling according Regulation (EC) No 1272/2008 [CLP]

Signal Word: Danger

Hazard pictogram:



Hazard statements

- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H332 Harmful if inhaled.
- H401 Toxic to aquatic life.
- H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

- P260 Do not breathe mist/vapors/spray.
- P264 Wash hands and skin contact areas thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P273 Avoid release to the environment.
- P280 Wear protective gloves / eye protection / face protection.
- P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P312 Call a POISON CENTER or doctor if you feel unwell.
- P303 + P361 + P353 IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water/shower.
- P304 + P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
- 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 advice/attention.
- P363 Wash contaminated clothing before reuse.
- P391 Collect spillage.
- P405 Store locked up
- P501 Dispose of contents/container through a waste management company authorized by the local government.

2.3 OSHA GHS classification

This product is classified as hazardous (acute/chronic health hazard) as defined within the GHS OSHA Hazard Communication Standard 29CFR1910.1200.

Section 3 - Composition / Information on Ingredients

3.1 Substances

Not applicable

3.2 Mixtures

<u>Component</u>	<u>Concentration</u>
Benzyl alcohol CAS No. 100-51-6 EINECS No. 202-859-9 GHS/CLP: Acute tox. (oral) 4 - H302; Acute tox. (dermal) 4 - H312; Acute tox. (inhal.: vapor) 4 - H332; Eye irritation 2A - H319; Aquatic acute 2 - H401	30-40%
Epoxy polyamine adduct NJ TSRN 56013900-5052 EINECS No. (polymer) GHS/CLP: Skin corros. 1A - H314; Eye damage 1 - H318	20-35%
Isophoronediamine CAS No. 2855-13-2 EINECS No. 220-666-8 GHS/CLP: Acute tox. (oral) 4 - H302; Acute tox. (dermal) 4 - H312; Skin corros. 1B - H314; Skin sens. 1 - H317; Aquatic acute 3 - H402; Aquatic chronic 3 - H412	15-25%
1,3-Cyclohexanedimethanamine CAS No. 2579-20-6 EINECS No. 219-941-5 GHS/CLP: Acute tox. (oral) 4 - H302; Acute tox. (dermal) 4 - H312; Skin corros. 1A - H314; Aquatic chronic 3 - H412	15-25%

Section 4 - First Aid Measures

4.1 Description of First Aid measures

General advice: consult a physician; show this SDS to doctor in attendance.

In the event of skin contact: Rinse immediately with plenty of water; remove contaminated clothing; wash thoroughly with soap and water for at least 15 minutes. If irritation, rash or other adverse effects develop, get medical attention immediately.

In the event of eye contact: Bathe the eye with running water for at least 15 minutes, lifting upper and lower eyelids. Get medical attention immediately.

In the event of swallowing: Do NOT induce vomiting unless advised by a physician. Rinse out mouth with water. Call nearest Poison Control Center or physician immediately.

In the event of exposure by inhalation: Move person to fresh air and keep at rest in a position comfortable for breathing; if breathing is irregular, provide artificial respiration; if there are breathing difficulties, administer oxygen; get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Harmful in contact with skin, if swallowed or if inhaled; can cause severe skin burns and eye damage; may cause an allergic skin reaction.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Eye wash stations and emergency showers should be available.

Section 5 - Fire Fighting Measures

5.1 Extinguishing media

Carbon dioxide, alcohol resistant foam, dry chemical, water fog; use water spray to cool fire-exposed containers.

5.2 Special hazards arising from the substance or mixture

Product may ignite if heated in excess of its flash point. Vapors may travel to sources of ignition and flashback. Vapor concentrations in enclosed areas may ignite explosively. Empty containers may contain ignitable vapors. Exposure to decomposition products may be harmful to health; combustion products may include but are not limited to: carbon monoxide, carbon dioxide, nitrogen oxides; the formation of hydrocarbon fragments is possible in the initial stages of fire (especially in between 400°C and 700°C); smoke may contain particles of the original material as well. Prevent fire-fighting waters from entering sewer or waterways.

5.3 Advice for fire fighters: Use protective fire fighting clothing and positive pressure self-contained breathing apparatus to protect against potential harmful and/or irritating fumes. Do not use high pressure water jet as this may spread the area of the fire.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Isolate area; ensure adequate ventilation; remove all sources of ignition; use appropriate personal protection equipment; avoid breathing mist, vapors, spray; avoid contact with skin, eyes and clothing; keep unnecessary and unprotected personnel from entering the involved area.

6.2 Environmental precautions

Halt the flow of material as soon as practical using appropriate barriers; turn containers leak-side up to stop the escape of liquid. Prevent contamination of soil and water. Prevent from spreading or entering into drains, ditches, waterways by using sand, earth or appropriate barriers.

6.3 Methods and material for containment and cleaning up

Soak up with sand, earth, diatomaceous earth or other suitable inert absorbent material; collect into suitable waste disposal containers. Reuse uncontaminated material when possible. Wash spillage site with large amounts of water. Dispose of in accordance with applicable local and federal environmental control laws and regulations.

6.4 Reference to other sections

For more information on exposure controls, personal protection and disposal, review data in section 8 and section 13 of this SDS.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Ensure adequate ventilation. Prevent inhalation of vapor, ingestion, and contact with skin, eyes and clothing. Keep containers closed when not in use. Precautions apply to empty containers as well. Do not eat, drink or smoke in the work area. Wash thoroughly after handling. Personal protective equipment must be worn during maintenance or repair of mixers, reactors or other equipment containing the material.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry area with adequate ventilation.

Incompatibilities: Do not store together with strong oxidizing agents.

Section 8 - Exposure Controls / Personal Protection

8.1 Control parameters

Occupational exposure limits: None established.

NOTE: The AIHA/WEEL for Benzyl alcohol is 10 ppm (45 mg/m³)

8.1.2 Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference can be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents for the determination of hazardous substances.

8.2 Exposure Controls:

Follow good industrial workplace practices; do not eat, drink or smoke while handling; wash hands before breaks and at end of workshift; follow recommendations in this SDS.

8.2.1 Appropriate engineering controls

Ensure adequate ventilation through local exhaust to control airborne concentrations.

8.2.2 Individual protection measures, such as personal protective equipment

8.2.2.1 Eye/face protection

Wear tight-fitting chemical safety goggles and/or face shield to prevent eye contact. Refer to OSHA Standard 29CFR1910.133 and European Standard EN166.

8.2.2.2 Skin protection

Wear impervious clothing as necessary to protect against product contact. Necessity for boots, apron, face shield, etc. will be dependent on any hazards presented in the work process. Refer to CFR1910.132 and CFR1910.136 for OSHA approved standards on protective clothing and footwear.

8.2.2.3 Respiratory protection

Respiratory protection is required wherever exposure limits are exceeded; use a NIOSH approved organic vapor cartridge respirator following the guidelines of an established respiratory protection program in compliance with 29CFR1910.134. Note that air-purifying respirators are only recommended for use in atmospheres containing up to ten times the permissible exposure limit; if this higher level is exceeded, a supplied air respirator must be used; always consult respirator manufacturer instructions. Self-contained breathing apparatus should also be available in case of emergency.

8.2.2.4 Hand protection

Use suitable impervious neoprene or nitrile rubber gloves. When prolonged or frequently repeated contact may occur, glove material should have a breakthrough time that exceeds 480 minutes (breakthrough rating = 6); when only brief contact is expected, a glove with a lesser breakthrough rating (rating 2 = >30 minutes) may be suitable. Note the requirements of Standard EN 374.

Other Protective Equipment: The type and degree of personal protective equipment appropriate will depend on the specific work operation. Eye wash stations and emergency showers should be available. Inspect and replace personal protective equipment at regular intervals; use professional care in their selection, use and care

8.3 Environmental exposure controls

Observe all precautions to prevent contamination of soil and waterways.

Section 9 - Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

9.1.1 General information:

Appearance: Liquid
Color: Clear to amber
Type of Odor: Amine-like
Odor Threshold: No data available

9.1.2 Important health, safety and environmental information:

Boiling Point: >205°C (>401°F)
Melting Point: Not determined
Flammability Classification: Combustible IIIB
Flash Point: >101°C (>214°F) (cc)
Autoignition Temperature: No data available
Decomposition Temperature: No data available
Flammability Limits (lower/upper): No data available
Vapor Pressure: No data available
Vapor Density (Air=1): >1
Evaporation Rate (BuAc=1): <1
Octanol/Water Partition Coefficient (log P_{ow}): Not determined
Specific Gravity: 1.01
Bulk Density: Not determined
Water Solubility: Partial (<2%)
pH: Alkaline
Viscosity: 200-400 cP @25°C
Explosive Properties: Not determined
Oxidizing Properties: Not determined
Molecular Formula: (mixture)
Average Molecular Weight (Daltons): No data
VOC Content: 30-50%

Section 10 - Stability and Reactivity

10.1 Stability and Reactivity

10.1 Reactivity

No dangerous reaction is known under normal use and storage conditions.

10.2 Stability

Stable under normal use and storage conditions.

10.3 Possibility of hazardous reactions

Mixtures with strongly acidic and strongly alkaline materials may produce an exothermic reaction.

10.4 Conditions to avoid

Avoid elevated temperatures and sources of ignition.

10.5 Incompatible materials

Acids, oxidizing agents, epoxies, isocyanates.

10.6 Hazardous decomposition products

Thermal decomposition will generate carbon monoxide, carbon dioxide and nitrogen oxides.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

No toxicity data has been developed for the product as a whole.

Toxicity Data for Benzyl Alcohol component:

Acute Oral Toxicity: LD50(rat): 1230-3100 mg/kg
Acute Oral Toxicity: LD50(rabbit): 1940 mg/kg
Acute Oral Toxicity: LD50(mouse): 1580 mg/kg
Acute Inhalation Toxicity: LC50(rat)(4-hr): 5000 mg/m³

Toxicity Data for Epoxy Polyamine Adduct component:

Acute Oral Toxicity: LD50(rat): >2000 mg/kg
Acute Dermal Toxicity: LD50(rabbit): >2000 mg/kg
Corrosive: causes severe skin burns and eye damage.

Toxicity Data for Isophoronediamine component:

Acute Oral Toxicity: LD50(rat): 1030 mg/kg
Acute Dermal Toxicity: LD50(rabbit): >2000 mg/kg
Inhalation Toxicity: LC50(rat)(4-hr): >5.01 mg/l
Corrosive: causes severe skin burns and eye damage.
Sensitizer.

Data for 1,3-Cyclohexanedimethanamine component:

Acute Oral Toxicity: LD50(rat): 880 mg/kg
Acute Dermal Toxicity: LD50(rabbit): 1700 mg/kg
Corrosive: causes severe skin burns and eye damage.

Skin Corrosion/Irritation: Causes severe skin burns and eye damage.

Serious Eye Damage/Irritation: Causes serious eye damage.

Skin Sensitization (guinea pig): May cause an allergic skin reaction.

Germ Cell Mutagenicity: Not classified as mutagenic.

Carcinogenicity: Not classified as carcinogenic. Not listed by OSHA/NTP/IARC.

Reproductive Toxicity: Not classified as reproductive toxin.

Specific Target Organ Toxicity - single exposure (STOT-se): Product not classified based on available data.

Specific Target Organ Toxicity - repeated exposure (STOT-re): Product not classified based on available data.

Aspiration Hazard: Possible aspiration hazard (alkaline).

Potential Health Effects:

Skin Contact: Corrosive; harmful in contact with skin; may cause itching, reddening, inflammation. May cause severe burns, blistering and skin damage; may cause an allergic reaction.

Eye Contact: Contact with vapors or liquid may cause tearing, blurred vision, severe irritation and possible chemical burns.

Ingestion: Harmful if swallowed; may cause gastrointestinal irritation, nausea and vomiting; may cause chemical burns to stomach, throat, mouth and nose.

Inhalation: Harmful if inhaled; may cause severe irritation of the respiratory tract; may cause CNS symptoms including headache, nausea, mental confusion, blurred vision, fatigue, dizziness and loss of coordination.

Chronic Health Effects:

May cause sensitization by contact. Prolonged skin contact may cause irritation, rash, burns or dermatitis; repeated overexposure to vapors and/or liquid may injure the liver, kidneys and respiratory system unless suitable engineering controls and/or personal protective equipment are used. May aggravate individuals sensitized to amines.

Section 12 - Ecological Information

12.1 Toxicity

No data available for product as a whole.

12.1.1 Acute/prolonged toxicity to fish

LC50 (Lepomis macrochirus)(96-hr): 10 mg/l

12.1.2 Acute/prolonged toxicity to aquatic invertebrates

No data available.

12.1.3 Acute/prolonged toxicity to aquatic plants

No data available.

12.1.4 Toxicity to bacteria, to soil dwelling organisms and to terrestrial plants

No data available.

12.1.5 Chronic toxicity to aquatic organisms

No data available.

12.1.6 General effect

Toxic to aquatic life with long lasting effects (based on similar product).

12.2 Persistence and degradability

Not expected to be readily biodegradable.

12.3 Bioaccumulative potential

One or more product components has a low potential to bioaccumulate.

12.4 Mobility in soil

No data available; do not allow product to enter soil/subsoil.

12.5 Results of PBT and vPvB assessment (EC reg. 453/2010)

Product not classified as Persistent, Bioaccumulative and Toxic

Product not classified as very Persistent or very Bioaccumulative

12.6 German WGK classification

Not determined

12.7 Other adverse effects

No other adverse effects are identified.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Disposal: Do not dump to ground, sewers or watercourses. Incinerate or otherwise dispose of in compliance with all applicable federal, state and local environmental control laws and regulations. Waste characterization according to RCRA guidelines and compliance with applicable laws are the responsibility solely of the waste generator.

Container Disposal: Containers should be drained of all residual product prior to disposal.

Section 14 - Transport Information

14.1 Shipping description

DOT Proper Shipping Description:

UN2735 Amines, liquid, corrosive, n.o.s. (Isophoronediamine, 1,3-Cyclohexanedimethanamine)
Hazard Class 8 PG III
ERG No. 153

IMDG:

UN2735 Amines, liquid, corrosive, n.o.s. (Isophoronediamine, 1,3-Cyclohexanedimethanamine)
Hazard Class 8 PG III
EmS No. F-A, S-B

IATA:

UN2735 Amines, liquid, corrosive, n.o.s. (Isophoronediamine, 1,3-Cyclohexanedimethanamine)
Hazard Class 8 PG III

Section 15 - Regulatory Information

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

SARA Title III Section 311/312 (40CFR370): Acute health hazard, chronic health hazard

SARA Title III Section 313 (40CFR372): No reportable components

CERCLA Status (40CFR302): No reportable components

(Release of a hazardous substance into the environment in an amount that equals or exceeds its reportable quantity (RQ) requires notification to the National Response Center at 800-424-8802.)

RCRA Status (40CFR261): Not listed

OSHA/NTP/IARC Carcinogen Status: Not listed

TSCA Inventory Status: Reported/included

Canadian DSL Status: Reported/included

Canadian WHMIS Status: D2B, E

Chemicals Known to the State of California to Cause Cancer or Reproductive Toxicity:

None known to be in the product at levels requiring a warning.

REACH Annex XIV (SVHC)

No listed components

REACH Annex XVII (Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles)

No listed components

REACH Status (EC 1907/2006): This material has been registered, pre-registered or is otherwise exempted from registration under the Registration, Evaluation and Authorization of Chemical Substances.

Chemical safety assessment

Not available

Section 16 - Other Information

HMIS ratings:

Health:	3
Flammability:	1
Reactivity:	0

(Personal protective equipment selection is best assigned by the user after performing a hazard assessment on the product as it is to be used in the specific work process.)

National chemical inventories

All components of this product are listed on the following chemical substance inventories:

TSCA (USA)
DSL (Canada)
EINECS (Europe)
ENCS (Japan)
ECL (Korea)
AICS (Australia)
PICCS (Philippines)
IECSC (China)
NZIoC (New Zealand)

Abbreviations

ACGIH American Conference of Governmental Industrial Hygienists
ADR International carriage of dangerous goods by Road
AICS Australian Inventory of Chemical Substances
AIHA American Industrial Hygiene Association
BfR Bundesinstitut für Risikobewertung recommendations for food contact materials
BCF Bioconcentration Factor
CERCLA Comprehensive Environmental Response, Compensation and Liability Act
CLP Classification, Labeling and Packaging regulation
DOT Department of Transportation
DSL Domestic Substances List
EINECS European Inventory of Existing Chemical Substances
ECL Existing Chemicals List (Korea)
ENCS Existing and New Chemical Substances Inventory (Japan)
EN 689 Workplace atmospheres – Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy
ERG Emergency Response Guide
GHS Globally Harmonized System
HMIS Hazardous Materials Information System
IARC International Agency for Research on Cancer
IATA International Air Transport Association
ICAO International Civil Aviation Organization
IDLH Immediately Dangerous to Life and Health
IMDG International Maritime Dangerous Goods
LD50 Lethal dose to 50% of test animal population

MAK	Maximale Arbeitsplatz Konzentration
NOAEL	No observable adverse effect level
NTP	National Toxicology Program
OEL	Occupational Exposure Limit
OSHA	Occupational Safety & Health Administration
PBT	Persistent, Bioaccumulative and Toxic
vPvB	Very Persistent and Very Bioaccumulative
PEL	Permissible exposure limit
PICCS	Philippine Inventory of Commercial Chemical Substances
PNEC	Predicted No Effect Concentration
REACH	Registration, evaluation and authorization of chemical substances
RID	International carriage of dangerous goods by Rail
SARA	Superfund Amendments and Reauthorization Act
STEL	Short Term Exposure Limit
SVHC	Substance of Very High Concern
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
VOC	Volatile organic compound
WEEL	Workplace Environmental Exposure Level
WGK	Wassergefährdungsklasse (Water Hazard Class)
WHMIS	Workplace Hazardous Material Identification System

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