AM-JF-EPOXY-B

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 09/02/2015

SECTION 1: Identification

1.1. Identification

Product form : Mixture

Product name : AM-JF-EPOXY-B

Product code : AM-JF-EPOXY-B

Other means of identification : AM-JF-EPOXY-B/Q

1.2. Relevant identified uses of the substance or mixture and uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Protective Industrial Polymers
7875 Bliss Parkway
North Ridgeville, Ohio 44039 - USA-Ohio
T 440-327-0015
www.protectpoly.com

1.4. Emergency telephone number

Emergency number : Chemtrec: 800-427-9300 (Outside USA) 703-527-3887

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Acute toxicity (oral) Category 4	H302
Acute toxicity (inhalation:dust,mist) Category 4	H332
Skin corrosion/irritation Category 1A	H314
Skin sensitization Category 1	H317
Specific target organ toxicity (single exposure) Category 2	H371

Full text of H statements : see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :

GHS05 GHS07 GHS08

Signal word (GHS-US) : Danger

Contains : Benzenemethanol; 1-Piperazine ethanamine; (4,4'-diaminodicyclohexyl)methane; Formaldehyde, polymer with benzenamine, hydrogenated; 2,4,6-tris(dimethylaminomethyl)phenol

Hazard statements (GHS-US) :
H302+H332 - Harmful if swallowed or if inhaled
H314 - Causes severe skin burns and eye damage
H317 - May cause an allergic skin reaction
H371 - May cause damage to organs (oral)

Precautionary statements (GHS-US) :
P260 - Do not breathe vapors
P261 - Avoid breathing vapors
P264 - Wash hands 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 must not be allowed out of the workplace
P280 - Wear protective clothing
P301+P312 - If swallowed: Call a doctor if you feel unwell

P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
P302+P352 - If on skin: Wash with plenty of soap
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - If inhaled: Remove person to fresh air and keep 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
P310 - Immediately call a doctor
P312 - Call a doctor if you feel unwell
P321 - Specific treatment (see a doctor if symptoms do not go away. on this label)
P330 - Rinse mouth
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention
P363 - Wash contaminated clothing before reuse
P405 - Store locked up
P501 - Dispose of contents/container to in accordance with local regulations

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Formaldehyde, polymer with benzenamine, hydrogenated	(CAS No) 135108-88-2	35 - 60	Acute Tox. 4 (Oral), H302
Benzenemethanol	(CAS No) 100-51-6	< 40	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2A, H319 Aquatic Acute 2, H401
1-Piperazine ethanamine	(CAS No) 140-31-8	0 - 15	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Skin Corr. 1A, H314 Skin Sens. 1, H317 Aquatic Chronic 3, H412
(4,4'-diaminodicyclohexyl)methane	(CAS No) 1761-71-3	0 - 5	Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314 Skin Sens. 1B, H317 STOT SE 2, H371 Aquatic Acute 2, H401
2,4,6-tris(dimethylaminomethyl)phenol	(CAS No) 90-72-2	0 - 5	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.

First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a physician immediately.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Call a physician immediately.

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

Symptoms/injuries after skin contact : Burns. May cause an allergic skin reaction.

Symptoms/injuries after eye contact : Serious damage to eyes.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Alcohol resistant foam, water, water fog, CO2, dry chemical, dry sand, limestone powder.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Combustible liquid.

Explosion hazard : may be ignited by sparks.

Reactivity : Product is not explosive.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Contain released substance, pump into suitable containers.

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear personal protective equipment. Do not breathe vapors. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes.

Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool. Store locked up.

Incompatible materials : Combustible materials. Sources of ignition.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Benzenemethanol (100-51-6)

Not applicable

1-Piperazine ethanamine (140-31-8)

Not applicable

(4,4'-diaminodicyclohexyl)methane (1761-71-3)

Not applicable

Formaldehyde, polymer with benzenamine, hydrogenated (135108-88-2)

Not applicable

2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)

Not applicable

8.2. Exposure controls

Appropriate engineering controls	:	Ensure good ventilation of the work station.
Hand protection	:	protective gloves.
Eye protection	:	Safety glasses.
Skin and body protection	:	Wear suitable protective clothing.
Respiratory protection	:	Wear respiratory protection.
Environmental exposure controls	:	Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Color	:	amber
Odor	:	Ammonical
Odor threshold	:	No data available
pH	:	Alkaline
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	> 392 °F
Flash point	:	> 100 °C
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability (solid, gas)	:	No data available
Explosion limits	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Vapor pressure	:	No data available
Relative density	:	1.03
Relative vapor density at 20 °C	:	No data available
Solubility	:	Water: < 0.1 g/l
Log Pow	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Product is not explosive.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Will not occur.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

organic acids.

10.6. Hazardous decomposition products

Ammonia. Aldehydes. Carbon dioxide. Carbon monoxide. Nitrogen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed. Inhalation:dust,mist: Harmful if inhaled.

AM-JF-EPOXY-B	
ATE US (oral)	647.277 mg/kg body weight
ATE US (dust, mist)	3.788 mg/l/4h

Benzenemethanol (100-51-6)	
LD50 oral rat	1620 mg/kg (Rat; Experimental value)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit; Inconclusive, insufficient data)
ATE US (oral)	1620.000 mg/kg body weight
ATE US (gases)	4500.000 ppmV/4h
ATE US (vapors)	11.000 mg/l/4h
ATE US (dust, mist)	1.500 mg/l/4h

1-Piperazine ethanamine (140-31-8)	
ATE US (oral)	1470.000 mg/kg body weight
ATE US (dermal)	880.000 mg/kg body weight

(4,4'-diaminodicyclohexyl)methane (1761-71-3)	
LD50 oral rat	625 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value)
LD50 dermal rabbit	2110 mg/kg body weight (Rabbit; Experimental value; OECD 402: Acute Dermal Toxicity)
ATE US (oral)	625.000 mg/kg body weight
ATE US (dermal)	2110.000 mg/kg body weight

Formaldehyde, polymer with benzenamine, hydrogenated (135108-88-2)	
LD50 oral rat	367 mg/kg
ATE US (oral)	367.000 mg/kg body weight

2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
LD50 oral rat	1200 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; 2169 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rat	> 2000 mg/kg (Rat; Literature study; Other; >1 ml/kg; Rat; Experimental value)
ATE US (oral)	1200.000 mg/kg body weight

Skin corrosion/irritation : Causes severe skin burns and eye damage.
pH: Alkaline

Serious eye damage/irritation : Not classified
pH: Alkaline

Respiratory or skin sensitization : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : May cause damage to organs (oral).

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Symptoms/injuries after skin contact : Burns. May cause an allergic skin reaction.

Symptoms/injuries after eye contact : Serious damage to eyes.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Before neutralisation, the product may represent a danger to aquatic organisms.

Benzenemethanol (100-51-6)	
LC50 fish 1	460 mg/l (LC50; EPA OPP 72-1; 96 h; Pimephales promelas; Static system; Fresh water; Experimental value)

1-Piperazine ethanamine (140-31-8)	
LC50 fish 1	> 100 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Oncorhynchus mykiss; Semi-static system; Fresh water; Experimental value)
EC50 Daphnia 1	58 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system)
Threshold limit algae 2	> 1000 mg/l (EC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Selenastrum capricornutum; Fresh water)

(4,4'-diaminodicyclohexyl)methane (1761-71-3)	
EC50 Daphnia 2	6.84 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
Threshold limit algae 1	141.42-200,ErC50; DIN 38412-9; 72 h; Desmodesmus subspicatus; Static system; Fresh water; Experimental value
Threshold limit algae 2	141.42-200,EbC50; DIN 38412-9; 72 h; Desmodesmus subspicatus; Static system; Fresh water; Experimental value

2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
EC50 Daphnia 2	41.3 mg/l (LC50; 48 h; Daphnia magna)
Threshold limit algae 2	84 mg/l (EC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Scenedesmus subspicatus; Static system; Fresh water; Experimental value)

12.2. Persistence and degradability

AM-JF-EPOXY-B	
Persistence and degradability	Not established.

Benzenemethanol (100-51-6)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. No (test)data on mobility of the substance available.
Biochemical oxygen demand (BOD)	1.6 g O_2/g substance
Chemical oxygen demand (COD)	2.4 g O_2/g substance
ThOD	2.5 g O_2/g substance

1-Piperazine ethanamine (140-31-8)	
Persistence and degradability	Not readily biodegradable in water. Low potential for mobility in soil.
Chemical oxygen demand (COD)	0.56 g O_2/g substance

(4,4'-diaminodicyclohexyl)methane (1761-71-3)	
Persistence and degradability	Not readily biodegradable in water. Low potential for adsorption in soil. Photolysis in the air.

2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
Persistence and degradability	Not readily biodegradable in water. Highly mobile in soil. Low potential for adsorption in soil.

12.3. Bioaccumulative potential

Benzenemethanol (100-51-6)	
Log Pow	1-1.1,Experimental value; Other; 20 °C
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

1-Piperazine ethanamine (140-31-8)	
BCF fish 1	<= >0.3<=6.3,BCF; OECD 305: Bioconcentration: Flow-Through Fish Test; >4<=6 weeks; Cyprinus carpio; Flow-through system; Fresh water; Read-across
Log Pow	-1.48 (Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method; 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

(4,4'-diaminodicyclohexyl)methane (1761-71-3)	
BCF fish 1	<= <=6<60,BCF; OECD 305: Bioconcentration: Flow-Through Fish Test; 4 weeks; Cyprinus carpio; Flow-through system; Fresh water; Read-across
Log Pow	2.03 - 3.26 (2.03; Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method; 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
Log Pow	0.77 (Literature; 0.219; Experimental value; Equivalent or similar to OECD 107; 21.5 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

AM-JF-EPOXY-B	
Mobility in soil	<=

Benzenemethanol (100-51-6)	
Surface tension	0.04 N/m (20 °C)

1-Piperazine ethanamine (140-31-8)	
Log Koc	log Koc,4.57; Read-across; GLP

(4,4'-diaminodicyclohexyl)methane (1761-71-3)	
Log Koc	Koc,SRC PCKOCWIN v2.0; 103.1; Calculated value; log Koc; SRC PCKOCWIN v2.0; 2.0132; Calculated value

2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
Log Koc	Koc,SRC PCKOCWIN v2.0; 20.98; QSAR; log Koc; 1.32; Calculated value

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Contain and dispose of waste according to local regulations.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN2735 Amines, liquid, corrosive, n.o.s. (Mixed Cycloalphatic amines, Heterocyclic amine), 8, III

UN-No.(DOT) : UN2735

Proper Shipping Name (DOT) : Amines, liquid, corrosive, n.o.s.
Mixed Cycloalphatic amines, Heterocyclic amine

Class (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136

Hazard labels (DOT) : 8 - Corrosive

Packing group (DOT) : III - Minor Danger

DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 241

DOT Symbols : G - Identifies PSN requiring a technical name

DOT Special Provisions (49 CFR 172.102) : IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672)
T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling
TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP

DOT Packaging Exceptions (49 CFR 173.xxx) : 154

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	60 L
DOT Vessel Stowage Location	:	A - The material may be stowed ''on deck'' or ''under deck'' on a cargo vessel and on a passenger vessel
DOT Vessel Stowage Other	:	52 - Stow ''separated from'' acids
Other information	:	No supplementary information available.

TDG

No additional information available

Transport by sea

UN-No. (IMDG) : ---------- TO BE COMPLETED/CALCULATED ----------

Air transport

UN-No. (IATA)	:	2735
Proper Shipping Name (IATA)	:	Amines, liquid, corrosive, n.o.s.
Class (IATA)	:	8 - Corrosives
Packing group (IATA)	:	III - Minor Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

AM-JF-EPOXY-B	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard

Benzenemethanol (100-51-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

1-Piperazine ethanamine (140-31-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

(4,4'-diaminodicyclohexyl)methane (1761-71-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Formaldehyde, polymer with benzenamine, hydrogenated (135108-88-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

1-Piperazine ethanamine (140-31-8)
U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

Full text of H-phrases:

H227	Combustible liquid
H302	Harmful if swallowed
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H371	May cause damage to organs
H401	Toxic to aquatic life
H412	Harmful to aquatic life with long lasting effects

HMIS III Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product