

MATERIAL SAFETY DATA SHEET

1. Product and company identification

Product name	Tapecoat Wet Bond Epoxy Mastic Hardener	
Manufacturer/Supplier	Chase Corporation - Tapecoat Division	
Address	1527 Lyons Street Evanston IL 60201 United States	
Telephone	General Assistance	800 543-3458
E-mail	info@chasecorp.com	
Contact person	Not available.	
Emergency telephone number	Chemtrec (US - 24 hrs)	800 424-9300
	Chemtrec (INTL - 24 hrs)	703-527-3887

Recommended use and Limitations on use

Recommended use Not available.

2. Hazards identification

Hazard classification

Physical hazards	Not classified.	
Health hazards	Acute toxicity (Oral)	Category 4 (60.49 % of the mixture consists of component(s) of unknown toxicity.)
	Acute toxicity (Dermal)	Category 4 (60.49 % of the mixture consists of component(s) of unknown toxicity.)
	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
	Respiratory sensitizer	Category 1
	Skin sensitizer	Category 1
	Toxic to reproduction	Category 2
	Specific target organ toxicity - single exposure	Category 3 respiratory tract irritation
Environmental hazards	Acute hazards to the aquatic environment	Category 2 (60.49 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.)
	Chronic hazards to the aquatic environment	Category 3 (66.97 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.)

Label elements

Symbols



Signal word

Danger

Hazard statement

Harmful if swallowed. Harmful in contact with skin. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Suspected of damaging fertility or the unborn child. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Precautionary statement

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. In case of inadequate ventilation wear respiratory protection.

Response

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. Specific treatment (see this label). If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Storage

Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards

None known.

3. Composition/information on ingredients

Substance or mixture

Mixture

Chemical name	CAS Number	Concentration (%)
Bisphenol A	80-05-7	20 - < 30
2,2'-iminodi(ethylamine)	111-40-0	5 - < 10
BENZYL ALCOHOL	100-51-6	5 - < 10
Other components below reportable levels		60 - < 70

4. First aid measures

First aid measures for different exposure routes

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. Take off immediately all contaminated clothing. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

Ingestion

Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms and effects

Burning pain and severe corrosive skin damage. Difficulty in breathing. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.

Personal protection for first-aid responders

IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

Notes to physician

Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

5. Fire-fighting measures

Extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Extinguishing media to avoid

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards during fire fighting

During fire, gases hazardous to health may be formed.

Special fire fighting procedures

Move containers from fire area if you can do so without risk.

Protection of fire-fighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

General fire hazards

No unusual fire or explosion hazards noted.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the MSDS.
Environmental precautions	Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.
Spill cleanup methods	<p>The product is immiscible with water and will spread on the water surface.</p> <p>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Use water spray to reduce vapors or divert vapor cloud drift. Prevent product from entering drains. Following product recovery, flush area with water.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills to original containers for re-use. For waste disposal, see section 13 of the MSDS.</p>

7. Handling and storage

Handling

Technical measures	No specific recommendations.
Local and general ventilation	Provide adequate ventilation.
Precautions	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Pregnant or breastfeeding women must not handle this product. Do not taste or swallow. When using, do not eat, drink or smoke. Avoid release to the environment. Do not empty into drains.
Safe handling advice	Avoid prolonged exposure. Should be handled in closed systems, if possible. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Observe good industrial hygiene practices. Use personal protection recommended in Section 8 of the MSDS.

Storage

Technical measures	Keep container tightly closed.
Suitable storage conditions	Store locked up. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the MSDS).
Incompatible materials	Alkaline metals. Strong acids. For further information, please refer to section 10 of the MSDS.
Safe packaging materials	Keep in original container.

8. Exposure controls/personal protection

Exposure limits

Taiwan. OELs. (Standards on Workplace Atmosphere of Dangerous and Hazardous Materials)

Components	Type	Value
2,2'-iminodi(ethylamine) (CAS 111-40-0)	TWA	4.2 mg/m ³ 1 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
2,2'-iminodi(ethylamine) (CAS 111-40-0)	TWA	1 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines

Taiwan OELs: Skin designation

2,2'-iminodi(ethylamine) (CAS 111-40-0) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

2,2'-iminodi(ethylamine) (CAS 111-40-0) Can be absorbed through the skin.

Engineering measures

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Personal protective equipment

Respiratory protection	Chemical respirator with organic vapor cartridge and full facepiece.
Hand protection	Wear appropriate chemical resistant gloves.
Eye protection	Chemical respirator with organic vapor cartridge and full facepiece.
Skin and body protection	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Hygiene measures	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.
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9. Physical and chemical properties

Appearance

Physical state	Liquid.
Form	Liquid.
Color	Light amber.
Odor	Ammoniacal.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	-38.2 °F (-39 °C) estimated
Boiling point, initial boiling point, and boiling range	> 392 °F (> 200 °C)
Flash point	> 392.0 °F (> 200.0 °C)
Auto-ignition temperature	> 392 °F (> 200 °C)
Flammability (solid, gas)	Not available.
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Negligible
Vapor density	Not available.
Evaporation rate	Not available.
Relative density	Not available.
Density	1.12 g/cm ³ estimated
Solubility(ies)	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	Not available.
Decomposition temperature	Not available.
Viscosity	3000 - 4000 cP
Percent volatile	9 % estimated
Other data	
Specific gravity	1 estimated
VOC (Weight %)	0 g/l

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Stability	Material is stable under normal conditions.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong acids. Alkaline metals.
Hazardous decomposition products	No hazardous decomposition products are known.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.

11. Toxicological information

Acute toxicity Harmful in contact with skin. Harmful if swallowed. May cause an allergic skin reaction. May cause respiratory irritation.

Product	Species	Test Results
Tapecoat Wet Bond Epoxy Mastic Hardener (CAS Mixture)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	22222.2227 mg/kg estimated
<i>Inhalation</i>		
LC100	Rat	2222.2222 mg/l, 8 Hours estimated
LC50	Rat	11111.1113 mg/l, 8 Hours estimated
<i>Oral</i>		
LD50	Mouse	6532.4458 mg/kg estimated
	Rabbit	21555.5547 mg/kg estimated
	Rat	4854.6304 mg/kg estimated
<i>Other</i>		
LD50	Guinea pig	1600 mg/kg estimated
	Mouse	840.0157 mg/kg estimated
	Rabbit	601.884 mg/kg estimated
	Rat	388.5323 mg/kg estimated

Components	Species	Test Results
2,2'-iminodi(ethylamine) (CAS 111-40-0)		
Acute		
<i>Oral</i>		
LD50	Rat	1080 mg/kg
<i>Other</i>		
LD50	Guinea pig	162 mg/kg
	Mouse	71 mg/kg
	Rabbit	1090 mg/kg
	Rat	74 mg/kg

BENZYL ALCOHOL (CAS 100-51-6)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	2000 mg/kg
<i>Inhalation</i>		
LC100	Rat	200 - 300 mg/l, 8 Hours
LC50	Rat	1000 mg/l, 8 Hours
<i>Oral</i>		
LD50	Mouse	1580 mg/kg
	Rabbit	1940 mg/kg
	Rat	1230 - 3100 mg/kg
<i>Other</i>		
LD50	Guinea pig	> 400 mg/kg
	Mouse	324 mg/kg
	Rat	53 mg/kg

Bisphenol A (CAS 80-05-7)		
Acute		
<i>Oral</i>		
LD50	Mouse	2500 mg/kg
	Rat	3300 mg/kg
<i>Other</i>		
LD50	Rabbit	150 mg/kg

Routes of exposure Inhalation. Ingestion. Skin contact. Eye contact.

Symptoms	Burning pain and severe corrosive skin damage. Difficulty in breathing. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.
Skin corrosion/irritation	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation	Causes serious eye damage.
Respiratory sensitizer	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitizer	May cause an allergic skin reaction.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Toxic to reproduction	Suspected of damaging fertility or the unborn child.
Specific target organ toxicity - single exposure	May cause respiratory irritation.
Specific target organ toxicity - repeated exposure	Not classified.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicological data

Product	Species		Test Results
Tapecoat Wet Bond Epoxy Mastic Hardener (CAS Mixture)			
Aquatic			
Crustacea	EC50	Daphnia	38.2855 mg/l, 48 hours estimated
Fish	LC50	Fish	21.7582 mg/l, 96 hours estimated
Components	Species		Test Results
2,2'-iminodi(ethylamine) (CAS 111-40-0)			
Aquatic			
Fish	LC50	Guppy (Poecilia reticulata)	1014 mg/l, 96 hours
BENZYL ALCOHOL (CAS 100-51-6)			
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	10.5 mg/l, 96 hours
Bisphenol A (CAS 80-05-7)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	9.2 - 11.4 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	3.6 - 5.4 mg/l, 96 hours

Ecotoxicity Toxic to aquatic life. Harmful to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

Persistence and degradability No data is available on the degradability of this product.

Biodegradability

Percent degradation (Aerobic biodegradation)

BENZYL ALCOHOL 94 %

Bioaccumulation

Bioaccumulative potential

Octanol/water partition coefficient log Kow

BENZYL ALCOHOL 1.1
Bisphenol A 3.32

Mobility in soil The product is immiscible with water and will spread on the water surface.

Other hazardous effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Residual waste Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Local disposal regulations

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

14. Transport information

IATA

UN number	UN2735
UN proper shipping name	Amines, liquid, corrosive, n.o.s. (2,2'-iminodi(ethylamine))
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Environmental hazards	No.
ERG Code	8L
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

UN number	UN2735
UN proper shipping name	AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S. (2,2'-iminodi(ethylamine))
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-B
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not available.

IATA; IMDG



15. Regulatory information

Applicable regulations This material safety data sheet was prepared in accordance with the Rules on Hazardous Communication of Dangerous Materials and Toxic Materials.

Regulation of Labeling and Hazard Communication of Dangerous and Toxic Substances: Dangerous Materials Classification

Not listed.

Regulation of Labeling and Hazard Communication of Dangerous and Toxic Substances: Toxic Materials Classification

2,2'-iminodi(ethylamine) (CAS 111-40-0) Other designated chemical

Methods and Facilities Standards for the Storage, Clearance and Disposal of Industrial Waste

Not listed.

Standards on Workplace Atmosphere of Dangerous and Hazardous Materials

2,2'-iminodi(ethylamine) (CAS 111-40-0) Listed.

Toxic Chemical Control Act

Bisphenol A (CAS 80-05-7) Classification: 4

GHS Classification List: GHS implementation phase 1 and 2 (CLA No. 0960145703, 0970146313, and 0990146707)

2,2'-iminodi(ethylamine) (CAS 111-40-0)
Bisphenol A (CAS 80-05-7)

Rules on Road Transportation Safety

Regulated.

16. Other information

References

ACGIH
EPA: AQUIRE database
NLM: Hazardous Substances Data Base
US. IARC Monographs on Occupational Exposures to Chemical Agents
Taiwan. Dangerous Materials (Rules on Hazard Communication of Dangerous Materials and Toxic Materials)
Taiwan. Industrial Precursor Chemicals (Categories and Regulations Governing Inspection and Declaration of Industrial Precursor Chemicals, MOEA Decree No. 87, as amended)
Taiwan. OELs. (Standards on Workplace Atmosphere of Dangerous and Hazardous Materials)
Taiwan. Toxic Chemical Substances (TCS) (List of Toxic Chemical Substances announced by the Environmental Protection Administration)
Taiwan. Toxic Materials (Rules on Hazard Communication of Dangerous Materials and Toxic Materials)

Issued by

Company name

Dan Libby

Prepared by

Not available.

Disclaimer

The information offered in this data sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication, however, no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process. This material is intended for industrial use only. No warranty, expressed or implied is made.

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