



SAFETY DATA SHEET EPO-TEK H27D Part A

1. IDENTIFICATION

<u>Product Name</u>	EPO-TEK H27D Part A
<u>Product No.</u>	EPO-TEK H27D Part A
<u>Identification No.</u>	UN3082
<u>Identified uses</u>	Adhesive.
<u>Supplier</u>	Epoxy Technology, Inc. 14 Fortune Drive Billerica, MA 01821 USA www.epotek.com (978) 667-3805 (978) 663-9782
<u>Emergency Telephone</u>	(800) 255-3924

2. HAZARD(S) IDENTIFICATION

<u>Appearance</u>	Paste
<u>Color</u>	Silver.
<u>Odor</u>	Mild.
<u>GHS Pictogram</u>	



Signal Word Warning

Hazard Statements

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H341	Suspected of causing genetic defects.
H411	Toxic to aquatic life with long lasting effects.

Precautionary Statements

P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P281	Use personal protective equipment as required.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+313	IF exposed or concerned: Get medical advice/attention.
P313	Get medical advice/attention.
P501	Dispose of contents/container in accordance with local regulations.

Contains

Bisphenol A Diglycidyl Ether Resin

GHS Classification

Physical and Chemical Hazards	Not classified.
Human health	Skin Irrit. 2 - H315; Eye Irrit. 2 - H319; Skin Sens. 1 - H317; Muta. 2 - H341
Environment	Aquatic Chronic 2 - H411

Human Health

Contains a substance/a group of substances which may cause harm to the unborn child.

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Inhalation

Gas or vapor in high concentrations may irritate respiratory system.

Ingestion

May cause discomfort if swallowed.

Skin Contact

May cause sensitization by skin contact. Irritating to skin.

Eye Contact

Irritating to eyes.

Health Warnings

Possible reproductive impact.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Bisphenol A Diglycidyl Ether Resin	10-30%
CAS No.: 25085-99-8	EC No.:
GHS Classification Skin Irrit. 2 - H315; Eye Irrit. 2 - H319; Skin Sens. 1 - H317; Aquatic Chronic 2 - H411	
Reactive Diluent	1-5%
CAS No.: Proprietary	EC No.: Proprietary
GHS Classification Skin Irrit. 2 - H315; Eye Irrit. 2 - H319; Resp. Sens. 1 - H334; Skin Sens. 1 - H317; Muta. 2 - H341	

4. FIRST-AID MEASURES

Description of first aid measures

Inhalation

Move the exposed person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.

Ingestion

NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Rinse mouth thoroughly. Get medical attention if any discomfort continues.

Skin Contact

Remove affected person from source of contamination. Remove contaminated clothing. Wash the skin immediately with soap and water. Get medical attention if any discomfort continues.

Eye Contact

Remove victim immediately from source of exposure. Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention.

Most important symptoms and effects, both acute and delayed

Inhalation

Inhalation of dusts during cutting, grinding or sanding of this product may cause irritation of the respiratory tract.

Ingestion

May cause discomfort if swallowed.

Skin Contact

Skin irritation. Allergic rash.

Eye Contact

Irritating and may cause redness and pain.

Indication of any immediate medical attention and special treatment needed

Notes To The Physician

Treat Symptomatically.

5. FIRE-FIGHTING MEASURES

Flash point (°C) 93

Extinguishing Media

Fire can be extinguished using: Dry chemicals. Foam. Carbon dioxide (CO₂).

Hazardous combustion products

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

Special Fire Fighting Procedures

Avoid breathing fire vapors. Water spray should be used to cool containers.

Protective Equipment For Fire-Fighters

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

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Wear protective clothing as described in Section 8 of this material safety data sheet.

Environmental Precautions

Do not discharge onto the ground or into water courses. Avoid release to the environment.

Spill Clean Up Methods

Stop leak if possible without risk. Absorb in vermiculite, dry sand or earth and place into containers. Flush with plenty of water to clean spillage area. Do not contaminate water sources or sewer.

Reference to other sections

For personal protection, see section 8.

7. HANDLING AND STORAGE

Handling

Avoid spilling, skin and eye contact. Keep away from heat, sparks and open flame. Do not eat, drink or smoke when using the product. Observe good chemical hygiene practices. Provide good ventilation.

Storage

Store at moderate temperatures in dry, well ventilated area. Keep container tightly sealed when not in use.

Storage Class

Chemical storage.

Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Protective Equipment



Process Conditions

Provide eyewash station.

Engineering Measures

Provide adequate general and local exhaust ventilation.

Respiratory Equipment

If ventilation is insufficient, suitable respiratory protection must be provided.

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Hand Protection

Use protective gloves.

Eye Protection

Wear approved safety goggles.

Other Protection

Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene Measures

DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

<u>Appearance</u>	Paste
<u>Color</u>	Silver.
<u>Odor</u>	Mild.
<u>Solubility</u>	Slightly soluble in water.
<u>Vapor density (air=1)</u>	>1
<u>Evaporation rate</u>	<BuAc
<u>Flash point (°C)</u>	93

10. STABILITY AND REACTIVITY

Reactivity

Reaction with: Strong oxidizing agents. Strong reducing agents.

Stability

Stable under normal temperature conditions.

Hazardous Polymerisation

Will not polymerise.

Conditions To Avoid

Avoid excessive heat for prolonged periods of time.

Materials To Avoid

Strong oxidizing substances. Strong reducing agents.

Hazardous Decomposition Products

Fire creates: Carbon monoxide (CO). Carbon dioxide (CO₂).

11. TOXICOLOGICAL INFORMATION

Toxicological Information on Ingredients:

Bisphenol A Diglycidyl Ether Resin (CAS: 25085-99-8)

Toxic Dose 1 - LD 50

>15,000 mg/kg (oral, rat)

Toxic Dose 2 - LD 50

>23,000 mg/kg (dermal, rabbit)

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Acute Fish Toxicity

Very toxic to aquatic organisms.

Degradability

No data available.

Bioaccumulative potential

No data available on bioaccumulation.

Mobility:

The product has poor water-solubility.

Other adverse effects

Not known.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of waste and residues in accordance with local authority requirements.

14. TRANSPORT INFORMATION

<u>UN No. (DOT/TDG)</u>	UN3082
<u>UN No. (IMDG)</u>	3082
<u>UN No. (ICAO)</u>	3082
<u>DOT Proper Shipping Name</u>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver, Bisphenol A Diglycidyl Ether Resin)
<u>TDG Proper Shipping Name</u>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver, Bisphenol A Diglycidyl Ether Resin)
<u>DOT Hazard Class</u>	
9	
<u>DOT Hazard Label</u>	
Class 9	
<u>TDG Class</u>	9
<u>TDG Label(s)</u>	9
<u>IMDG Class</u>	9
<u>ICAO Class</u>	9
<u>Transport Labels</u>	



<u>DOT Pack Group</u>	III
<u>IMDG Pack Group</u>	III
<u>Air Pack Group</u>	III

Environmentally Hazardous Substance/Marine Pollutant



EMS F-A, S-F

15. REGULATORY INFORMATION

US Federal RegulationsSARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities

None of the ingredients are listed.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

The following ingredients are listed.

Silver; 1,000 lbs (454 Kg)

SARA Extremely Hazardous Substances EPCRA Reportable Quantities

None of the ingredients are listed.

SARA 313 Emission Reporting

The following ingredients are listed.

Silver

CAA Accidental Release Prevention

None of the ingredients are listed.

OSHA Highly Hazardous Chemicals

None of the ingredients are listed.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins

None of the ingredients are listed.

California Air Toxics "Hot Spots" (A-I)

The following ingredients are listed.

Silver

California Air Toxics "Hot Spots" (A-II)

None of the ingredients are listed.

Massachusetts "Right To Know" List

The following ingredients are listed.

Silver

Rhode Island "Right To Know" List

The following ingredients are listed.

Silver

Minnesota "Right To Know" List

The following ingredients are listed.

Silver

New Jersey "Right To Know" List

The following ingredients are listed.

Silver

Pennsylvania "Right To Know" List

The following ingredients are listed.

Silver

International Inventories

EU - EINECS/ELINCS

At least one ingredient is not listed.

Canada – DSL/NDSL

All ingredients are listed or exempt.

US - TSCA

All ingredients are listed or exempt.

US – TSCA 12(b) Export Notification

None of the ingredients are listed.

Australia - AICS

All ingredients are listed or exempt.

Japan – MITI

At least one ingredient is not listed.

Korea - KECI

All ingredients are listed or exempt.

China - IECSC

All ingredients are listed or exempt.

Philippines – PICCS

All ingredients are listed or exempt.

16. OTHER INFORMATION

Revision Date

03/17/2015

Revision

1

EPO-TEK H27D Part A

Disclaimer

Information contained in this publication or as otherwise supplied to Users is believed to be accurate and is given in good faith, but it is for the Users to satisfy themselves of the suitability of the product for their own particular purpose. Epoxy Technology, Inc. gives no warranty as to the fitness of the product for any particular purpose and any implied warranty or condition (statutory or otherwise) is excluded except to the extent that exclusion is prevented by law. Epoxy Technology, Inc. accepts no liability for loss or damage (other than that arising from death or personal injury caused by defective product, if proved) resulting from reliance on this information. Freedom under Patents, Copyright and Designs cannot be assumed.



SAFETY DATA SHEET EPO-TEK H27D Part B

1. IDENTIFICATION

<u>Product Name</u>	EPO-TEK H27D Part B
<u>Product No.</u>	EPO-TEK H27D Part B
<u>Identified uses</u>	Adhesive.
<u>Supplier</u>	Epoxy Technology, Inc. 14 Fortune Drive Billerica, MA 01821 USA www.epotek.com (978) 667-3805 (978) 663-9782
<u>Emergency Telephone</u>	(800) 255-3924

2. HAZARD(S) IDENTIFICATION

<u>Appearance</u>	Liquid
<u>Color</u>	Amber.
<u>Odor</u>	Mild.
<u>GHS Pictogram</u>	



Signal Word Danger

Hazard Statements

H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary Statements

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P285	In case of inadequate ventilation wear respiratory protection.
P305+351+338	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 POISON CENTER or doctor/physician.
P342+311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P501	Dispose of contents/container in accordance with local regulations.

Contains

Phthalic Anhydride

GHS Classification

Physical and Chemical Hazards	Not classified.
Human health	Eye Dam. 1 - H318; Resp. Sens. 1 - H334; Skin Sens. 1 - H317
Environment	Not classified.

Inhalation

May cause sensitization by inhalation. In high concentrations, vapors may irritate throat and respiratory system and cause coughing.

Ingestion

May cause discomfort if swallowed.

Skin Contact

May cause sensitization by skin contact. Prolonged contact may cause redness, irritation and dry skin.

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Eye Contact

Risk of serious damage to eyes.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Phthalic Anhydride	1-5%
CAS No.: 85-44-9	EC No.:
GHS Classification Acute Tox. 4 - H302; Skin Irrit. 2 - H315; Eye Dam. 1 - H318; Resp. Sens. 1 - H334; Skin Sens. 1 - H317; STOT SE 3 - H335	
Substituted Anhydride	60-100%
CAS No.: Proprietary	EC No.: Proprietary
GHS Classification Eye Dam. 1 - H318; Resp. Sens. 1 - H334; Skin Sens. 1 - H317	
Substituted Imidazole	1-5%
CAS No.: Proprietary	EC No.: Proprietary
GHS Classification Acute Tox. 4 - H302; Skin Irrit. 2 - H315; Eye Dam. 1 - H318; STOT SE 3 - H335	

4. FIRST-AID MEASURES

Description of first aid measures

Inhalation

Move the exposed person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.

Ingestion

NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Rinse mouth thoroughly. Get medical attention if any discomfort continues.

Skin Contact

Remove affected person from source of contamination. Remove contaminated clothing. Wash the skin immediately with soap and water. Get medical attention if irritation persists after washing.

Eye Contact

Remove victim immediately from source of exposure. Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Get medical attention immediately. Continue to rinse.

Most important symptoms and effects, both acute and delayed

Inhalation

May cause an asthma-like shortness of breath. Irritation of nose, throat and airway. Vapors may cause headache, fatigue, dizziness and nausea.

Ingestion

May cause discomfort if swallowed.

Skin Contact

Allergic rash. May cause skin irritation/eczema.

Eye Contact

Extreme irritation of eyes and mucous membranes, including burning and tearing. Corneal damage.

Indication of any immediate medical attention and special treatment needed

EPO-TEK H27D Part B

Notes To The Physician

Treat Symptomatically.

5. FIRE-FIGHTING MEASURES

Flash point (°C) 93

Extinguishing Media

Fire can be extinguished using: Dry chemicals. Foam. Carbon dioxide (CO₂).

Hazardous combustion products

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

Special Fire Fighting Procedures

Avoid breathing fire vapors. Water spray should be used to cool containers.

Protective Equipment For Fire-Fighters

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

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Wear protective clothing as described in Section 8 of this material safety data sheet.

Environmental Precautions

Avoid release to the environment.

Spill Clean Up Methods

Stop leak if possible without risk. Absorb in vermiculite, dry sand or earth and place into containers. Flush with plenty of water to clean spillage area. Do not contaminate water sources or sewer.

Reference to other sections

For personal protection, see section 8.

7. HANDLING AND STORAGE

Handling

Avoid spilling, skin and eye contact. Keep away from heat, sparks and open flame. Do not eat, drink or smoke when using the product. Observe good chemical hygiene practices. Avoid inhalation of vapors.

Storage

Store at moderate temperatures in dry, well ventilated area.

Storage Class

Chemical storage.

Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

COMPONENT	STD	TWA (8-hrs)		STEL (15 min)		Notes
Phthalic Anhydride	ACGIH	1 ppm				A4, Sen
Phthalic Anhydride	PEL	2 ppm	12 mg/m ³			
COMPONENT						IDLH
Phthalic Anhydride						60 mg/m ³

ACGIH=American Conference of Governmental Industrial Hygienists.

A4: Not Classifiable as a Human Carcinogen.

SEN: Sensitizer.

Protective Equipment

Process Conditions

Provide eyewash station.

Engineering Measures

Provide adequate general and local exhaust ventilation.

Respiratory Equipment

If ventilation is insufficient, suitable respiratory protection must be provided.

Hand Protection

Wear protective gloves.

Eye Protection

Wear tight-fitting goggles or face shield.

Other Protection

Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene Measures

DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

<u>Appearance</u>	Liquid
<u>Color</u>	Amber.
<u>Odor</u>	Mild.
<u>Solubility</u>	Slightly soluble in water.
<u>Vapor density (air=1)</u>	>1
<u>Evaporation rate</u>	<BuAc
<u>Flash point (°C)</u>	93

10. STABILITY AND REACTIVITY

Reactivity

Reaction with: Strong oxidizing agents. Strong reducing agents.

Stability

Stable under normal temperature conditions.

Hazardous Polymerisation

Will not polymerise.

Conditions To Avoid

Avoid excessive heat for prolonged periods of time.

Materials To Avoid

Strong oxidizing substances. Strong reducing agents.

Hazardous Decomposition Products

Fire creates: Carbon monoxide (CO). Carbon dioxide (CO₂).

11. TOXICOLOGICAL INFORMATION

Toxicological Information on Ingredients:

Substituted Anhydride (CAS: Proprietary)

Toxic Dose 1 - LD 50

4, 428 mg/kg (oral, rat)

Toxic Dose 1 - LD 50

1, 530 mg/kg (oral, rat)

Toxic Dose 2 - LD 50

>10, 000 mg/kg (dermal, rabbit)

Toxic Conc. - LC 50

>210 mg/m³/1H (inhalation, rat)

12. ECOLOGICAL INFORMATION

Ecotoxicity

There are no data on the ecotoxicity of this product.

Acute Toxicity - Fish

Not available.

Degradability

No data available.

Bioaccumulative potential

No data available on bioaccumulation.

Mobility:

The product has poor water-solubility.

Other adverse effects

Not known.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of waste and residues in accordance with local authority requirements.

14. TRANSPORT INFORMATION

General The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, DOT).

Road Transport Notes Not Classified

Rail Transport Notes Not classified.

Sea Transport Notes Not classified.

Air Transport Notes Not classified.

Transport Labels

No transport warning sign required.

Environmentally Hazardous Substance/Marine Pollutant

No.

Transport in Bulk according to Annex II of MARPOL 73/78 and the IBC Code Notes

Not applicable.

15. REGULATORY INFORMATION

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities

None of the ingredients are listed.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

The following ingredients are listed.

Phthalic Anhydride; 5, 000 lbs (2270 Kg)

SARA Extremely Hazardous Substances EPCRA Reportable Quantities

None of the ingredients are listed.

SARA 313 Emission Reporting

The following ingredients are listed.

Phthalic Anhydride

CAA Accidental Release Prevention

None of the ingredients are listed.

OSHA Highly Hazardous Chemicals

None of the ingredients are listed.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins

None of the ingredients are listed.

California Air Toxics "Hot Spots" (A-I)

The following ingredients are listed.

Phthalic Anhydride

California Air Toxics "Hot Spots" (A-II)

None of the ingredients are listed.

Massachusetts "Right To Know" List

The following ingredients are listed.

Phthalic Anhydride

Rhode Island "Right To Know" List

The following ingredients are listed.

Phthalic Anhydride

Minnesota "Right To Know" List

The following ingredients are listed.

Phthalic Anhydride

New Jersey "Right To Know" List

The following ingredients are listed.

Phthalic Anhydride

Pennsylvania "Right To Know" List

The following ingredients are listed.

Phthalic Anhydride

International Inventories

EU - EINECS/ELINCS

All ingredients are listed or exempt.

Canada – DSL/NDSL

All ingredients are listed or exempt.

US - TSCA

All ingredients are listed or exempt.

US – TSCA 12(b) Export Notification

None of the ingredients are listed.

Australia - AICS

At least one ingredient is not listed.

Japan – MITI

At least one ingredient is not listed.

Korea - KECI

All ingredients are listed or exempt.

China - IECSC

All ingredients are listed or exempt.

Philippines – PICCS

All ingredients are listed or exempt.

16. OTHER INFORMATION

Revision Date 03/17/2015

Revision 1

Disclaimer

Information contained in this publication or as otherwise supplied to Users is believed to be accurate and is given in good faith, but it is for the Users to satisfy themselves of the suitability of the product for their own particular purpose. Epoxy Technology, Inc. gives no warranty as to the fitness of the product for any particular purpose and any implied warranty or condition (statutory or otherwise) is excluded except to the extent that exclusion is prevented by law. Epoxy Technology, Inc. accepts no liability for loss or damage (other than that arising from death or personal injury caused by defective product, if proved resulting from reliance on this information. Freedom under Patents, Copyright and Designs cannot be assumed.