



## SAFETY DATA SHEET EPO-TEK H77S Part A

### 1. IDENTIFICATION

<u>Product Name</u>	EPO-TEK H77S Part A
<u>Product No.</u>	EPO-TEK H77S Part A
<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>	Grey.
<u>Odor</u>	Mild.
<u>GHS Pictogram</u>	



Signal Word                      Danger

#### Hazard Statements

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H412	Harmful to aquatic life with long lasting effects.

#### Precautionary Statements

P280	Wear protective gloves/protective clothing/eye protection/face 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.
P501	Dispose of contents/container in accordance with local regulations.

#### Contains

Bisphenol A Diglycidyl Ether Resin  
Reactive Diluent

#### GHS Classification

Physical and Chemical Hazards	Not classified.
Human health	Skin Irrit. 2 - H315; Eye Dam. 1 - H318; Skin Sens. 1 - H317
Environment	Aquatic Chronic 3 - H412

#### 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. Irritating to skin.

#### Eye Contact

Risk of serious damage to eyes.

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### 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	10-30%
CAS No.: Proprietary	EC No.: Proprietary
GHS Classification Acute Tox. 4 - H302; Acute Tox. 4 - H312; Skin Irrit. 2 - H315; Eye Dam. 1 - H318; Skin Sens. 1 - H317	

### 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

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

#### Indication of any immediate medical attention and special treatment needed

##### Notes To The Physician

Treat Symptomatically.

### 5. FIRE-FIGHTING MEASURES

Flash point (°C) 204

##### Extinguishing Media

Fire can be extinguished using: Dry chemicals. Foam. Carbon dioxide (CO<sub>2</sub>).

##### 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.

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## 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 discharge to the aquatic 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 handle broken packages without protective equipment. Do not eat, drink or smoke when using the product. Avoid inhalation of vapors.

### 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 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.

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## 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>	Grey.
<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>	204

## 10. STABILITY AND REACTIVITY

### Reactivity

Reaction with: Strong oxidizing agents. Strong reducing agents.

### Stability

Stable under normal temperature conditions.

### Hazardous Polymerisation

Will not occur.

### Conditions To Avoid

Avoid excessive heat for prolonged periods of time. Avoid contact with strong reducing agents. Avoid heat, flames and other sources of ignition.

### Materials To Avoid

Strong oxidizing substances. Strong reducing agents.

### Hazardous Decomposition Products

Fire creates: Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

## 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)

Reactive Diluent (CAS: Proprietary)

#### Toxic Dose 1 - LD 50

1, 163 mg/kg (oral, rat)

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

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

### 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.

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### 14. TRANSPORT INFORMATION

<u>General</u>	The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, DOT).
<u>Road Transport Notes</u>	Not Classified
<u>Rail Transport Notes</u>	Not classified.
<u>Sea Transport Notes</u>	Not classified.
<u>Air Transport Notes</u>	Not classified.
<u>Transport Labels</u>	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)

None of the ingredients are listed.

##### SARA Extremely Hazardous Substances EPCRA Reportable Quantities

None of the ingredients are listed.

##### SARA 313 Emission Reporting

None of the ingredients are listed.

##### 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)

None of the ingredients are listed.

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

None of the ingredients are listed.

##### Massachusetts "Right To Know" List

None of the ingredients are listed.

##### Rhode Island "Right To Know" List

None of the ingredients are listed.

##### Minnesota "Right To Know" List

None of the ingredients are listed.

##### New Jersey "Right To Know" List

None of the ingredients are listed.

Pennsylvania "Right To Know" List

None of the ingredients are listed.

International Inventories

EU - EINECS/ELINCS

At least one ingredient is not listed.

Canada – DSL/NDSL

At least one ingredient is not listed.

US - TSCA

At least one ingredient is not listed.

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

At least one ingredient is not listed.

China - IECSC

At least one ingredient is not listed.

Philippines – PICCS

At least one ingredient is not listed.

16. OTHER INFORMATION

<u>Revision Date</u>	11/17/2014
<u>Revision</u>	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.



## SAFETY DATA SHEET EPO-TEK H77S Part B

### 1. IDENTIFICATION

<u>Product Name</u>	EPO-TEK H77S Part B
<u>Product No.</u>	EPO-TEK H77S 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  
Substituted 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

Vapors may irritate the respiratory system and cause coughing, asthmatic breathing and breathlessness. Vapors may cause headache, fatigue, dizziness and nausea.

#### Ingestion

May cause discomfort if swallowed.

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## Skin Contact

May cause sensitization by skin contact.

## 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	

### 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

Vapors may cause headache, fatigue, dizziness and nausea. Irritation of nose, throat and airway. Difficulty in breathing.

##### Ingestion

May cause discomfort if swallowed.

##### Skin Contact

Allergic rash. Prolonged contact may cause redness, irritation and dry skin.

##### 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

##### 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).



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## 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.

## 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 handle broken packages without protective equipment. Do not eat, drink or smoke when using the product. Avoid inhalation of vapors. 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

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

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 ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors.

### Respiratory Equipment

No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists.

### Hand Protection

Wear protective gloves.

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### 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 occur.

### Conditions To Avoid

Avoid excessive heat for prolonged periods of time. Avoid contact with oxidizers or reducing agents. Avoid heat, flames and other sources of ignition.

### Materials To Avoid

Strong oxidizing substances. Strong reducing agents.

### Hazardous Decomposition Products

In case of fire, toxic gases (CO, CO<sub>2</sub>, NO<sub>x</sub>) may be formed.

## 11. TOXICOLOGICAL INFORMATION

### Toxicological Information on Ingredients:

#### 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/m<sup>3</sup>/1H (inhalation, rat)

Substituted Anhydride (CAS: Proprietary)

Phthalic Anhydride (CAS: 85-44-9)

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Not known.

### 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>General</u>	The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, DOT).
<u>Road Transport Notes</u>	Not Classified
<u>Rail Transport Notes</u>	Not classified.
<u>Sea Transport Notes</u>	Not classified.
<u>Air Transport Notes</u>	Not classified.
<u>Transport Labels</u>	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 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.

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 RegulationsCalifornia 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

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### 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

At least one ingredient is not listed.

#### China - IECSC

All ingredients are listed or exempt.

#### Philippines – PICCS

At least one ingredient is not listed.

## 16. OTHER INFORMATION

<u>Revision Date</u>	11/17/2014
<u>Revision</u>	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.