



SAFETY DATA SHEET
EPO-TEK 353ND-T Part A

1. IDENTIFICATION

<u>Product Name</u>	EPO-TEK 353ND-T Part A
<u>Product No.</u>	EPO-TEK 353ND-T 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>	Tan.
<u>Odor</u>	Mild.
<u>GHS Pictogram</u>	



Signal Word Warning

Hazard Statements

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
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 .
H411	Toxic to aquatic life with long lasting effects.

Precautionary Statements

P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
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.
P313	Get medical advice/attention.
P501	Dispose of contents/container in accordance with local regulations.

Contains

Epoxy Phenol Novolac

GHS Classification

Physical and Chemical Hazards	Not classified.
Human health	Acute Tox. 4 - H302;Acute Tox. 4 - H312;Acute Tox. 4 - H332;Skin Irrit. 2 - H315;Eye Irrit. 2 - H319;Skin Sens. 1 - H317;STOT SE 2 - H371
Environment	Aquatic Chronic 2 - H411

EPO-TEK 353ND-T Part A

Human Health

In high concentrations, vapors and spray mists are narcotic and may cause headache, fatigue, dizziness and nausea. Irritating to eyes and skin. Harmful by inhalation, in contact with skin and if swallowed.

General Information

The severity of the symptoms described below will vary based on concentration and length of exposure.

Inhalation

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

Ingestion

Gastrointestinal symptoms, including upset stomach. Harmful if swallowed.

Skin Contact

Irritating to skin. Harmful in contact with skin.

Eye Contact

Irritating and may cause redness and pain.

Environment

The product contains a substance which is toxic to aquatic organisms and which may cause long term adverse effects in the aquatic environment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Epoxy Phenol Novolac	60-100%
CAS No.: 9003-36-5	EC No.:
GHS Classification Skin Irrit. 2 - H315; Eye Irrit. 2B - H320; Skin Sens. 1 - H317; Aquatic Chronic 2 - H411	
Polar Activator	1-5%
CAS No.: Proprietary	EC No.: Proprietary
GHS Classification Flam. Liq. 2 - H225; Acute Tox. 3 - H301; Acute Tox. 3 - H311; Acute Tox. 3 - H331; STOT SE 1 - H370	

Composition Comments

The Data Shown is in accordance with the latest EC Directives.

4. FIRST-AID MEASURES

Description of first aid measures

General Information

General first aid, rest, warmth and fresh air. Do not give victim anything to drink if they are unconscious. Get medical attention if any discomfort continues.

Inhalation

Place unconscious person on the side in the recovery position and ensure breathing can take place. If respiratory problems, artificial respiration/oxygen. Get medical attention if any discomfort continues.

Ingestion

Immediately rinse mouth and drink plenty of water or milk. Keep person under observation. Do not induce vomiting. If vomiting occurs, keep head low. Transport immediately to hospital and bring along these instructions.

Skin Contact

Immediately remove contaminated clothing. Wash off promptly and flush contaminated skin with water. Promptly remove clothing if soaked through and flush skin with water.

Eye Contact

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 promptly if symptoms occur after washing.

Most important symptoms and effects, both acute and delayed

EPO-TEK 353ND-T Part A

Inhalation

Vapors may cause headache, fatigue, dizziness and nausea.

Ingestion

May cause stomach pain or vomiting.

Skin Contact

Severe irritation. Allergic rash.

Eye Contact

Irritation of eyes and mucous membranes.

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.

Unusual Fire & Explosion Hazards

Fire causes formation of toxic gases.

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 into drains, water courses or onto the ground. Avoid release to the environment.

Spill Clean Up Methods

Absorb in vermiculite, dry sand or earth and place into containers. Wash thoroughly after dealing with a spillage.

Reference to other sections

For personal protection, see section 8.

7. HANDLING AND STORAGE

Handling

Avoid spilling, skin and eye contact. Provide good ventilation. Avoid inhalation of vapors. Do not eat, drink or smoke when using the product.

Storage

Store at moderate temperatures in dry, well-ventilated area. Keep containers tightly closed. Keep away from heat, sparks and open flame. Store away from: Oxidizing material.

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
Polar Activator	ACGIH	200 ppm		250 ppm		Skin
Polar Activator	PEL	200 ppm	260 mg/m ³			
COMPONENT						IDLH
Polar Activator						6000 ppm

ACGIH=American Conference of Governmental Industrial Hygienists.

Skin: Danger of cutaneous absorption. (ACGIH)

Protective EquipmentProcess Conditions

Provide eyewash station.

Engineering Measures

All handling to take place in well-ventilated area.

Respiratory Equipment

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

Hand Protection

Wear protective gloves. Neoprene gloves are recommended. Barrier cream applied before work may make it easier to clean the skin after exposure, but does not prevent absorption through the skin.

Eye Protection

Wear splash-proof eye goggles to prevent any possibility of eye contact.

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>	Tan.
<u>Odor</u>	Mild.
<u>Solubility</u>	Insoluble in water
<u>Bulk Density</u>	1.12 kg/l
<u>Vapor density (air=1)</u>	
Not available.	
<u>Evaporation rate</u>	<BuAc
<u>Flash point (°C)</u>	>93

10. STABILITY AND REACTIVITY

Reactivity

Violent reaction with: Strong oxidizing agents.

Stability

Stable under normal temperature conditions.

Hazardous Polymerisation

Will not polymerise.

Conditions To Avoid

Avoid exposure to high temperatures or direct sunlight. Avoid contact with oxidizers.

Materials To Avoid

Strong oxidizing substances.

Hazardous Decomposition Products

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

11. TOXICOLOGICAL INFORMATION

Toxicological Information on Ingredients:

Epoxy Phenol Novolac (CAS: 9003-36-5)

Toxic Dose 1 - LD 50

>5, 000 mg/kg (oral, rat)

12. ECOLOGICAL INFORMATION

Ecotoxicity

Dangerous for the environment: May cause long-term adverse effects in the aquatic environment.

Degradability

The product is biodegradable.

Bioaccumulative potential

The product contains potentially bio-accumulating substances.

Mobility:

Mobile.

Other adverse effects

Not known.

13. DISPOSAL CONSIDERATIONS

Waste Management

Waste to be treated as controlled waste. Disposal to licensed waste disposal site in accordance with local Waste Disposal Authority.

Disposal Methods

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

14. TRANSPORT INFORMATION

General

Regulated. See information below.

UN No. (DOT/TDG)

UN3082

UN No. (IMDG)

3082

UN No. (ICAO)

3082

DOT Proper Shipping Name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy Phenol Novolac)

TDG Proper Shipping Name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Epoxy Phenol Novolac)

DOT Hazard Class

9

DOT Hazard Label

Class 9

TDG Class

9

TDG Label(s)

9

IMDG Class

9

ICAO Class

9

Transport Labels



DOT Pack Group

III

IMDG Pack Group

III

Air Pack Group

III

Environmentally Hazardous Substance/Marine Pollutant



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.

Polar Activator; 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.

Polar Activator

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

The following ingredients are listed.

WARNING: This product contains a substance known to the State of California to cause cancer and/or reproductive harm.

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

The following ingredients are listed.

Polar Activator

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

None of the ingredients are listed.

Massachusetts "Right To Know" List

The following ingredients are listed.

Polar Activator

Rhode Island "Right To Know" List

The following ingredients are listed.

Polar Activator

Minnesota "Right To Know" List

The following ingredients are listed.

Polar Activator

New Jersey "Right To Know" List

The following ingredients are listed.

Polar Activator

Pennsylvania "Right To Know" List

The following ingredients are listed.

Polar Activator

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 11 June 2014

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.



SAFETY DATA SHEET
EPO-TEK 353ND-T Part B

1. IDENTIFICATION

<u>Product Name</u>	EPO-TEK 353ND-T Part B
<u>Product No.</u>	EPO-TEK 353ND-T Part B
<u>Identification No.</u>	UN3267
<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>	Slight odor.
<u>GHS Pictogram</u>	



Signal Word Danger

Hazard Statements

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H361d	CLP only - Suspected of damaging the unborn child.

Precautionary Statements

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.
P310	Immediately call a POISON CENTER or doctor/physician.
P501	Dispose of contents/container to ...

Contains

Imidazole

GHS Classification

Physical and Chemical Hazards	Not classified.
Human health	Acute Tox. 4 - H302; Skin Corr. 1B - H314; Repr. 2 - H361d
Environment	Not classified.

Inhalation

Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Ingestion

Harmful if swallowed.

Skin Contact

Causes burns.

EPO-TEK 353ND-T Part B

Eye Contact

Causes burns.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Imidazole	30-60%
CAS No.: 288-32-4	EC No.:
GHS Classification Acute Tox. 4 - H302; Skin Corr. 1B - H314; Repr. 2 - H361d	
Imidazole Bend	60-100%
CAS No.: Proprietary	EC No.: Proprietary
GHS Classification Acute Tox. 4 - H302; Eye Dam. 1 - H318	

4. FIRST-AID MEASURES

Description of first aid measures

Inhalation

Move the exposed person to fresh air at once. Get medical attention. Provide rest, warmth and fresh air. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen.

Ingestion

DO NOT INDUCE VOMITING! NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Remove victim immediately from source of exposure. Drink plenty of water. Get medical attention immediately! Provide rest, warmth and fresh air.

Skin Contact

Remove contaminated clothing. Wash the skin immediately with soap and water. Get medical attention if irritation persists after washing.

Eye Contact

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. Get medical attention promptly if symptoms occur after washing.

Most important symptoms and effects, both acute and delayed

Ingestion

May cause chemical burns in mouth and throat.

Skin Contact

Burns can occur.

Eye Contact

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

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

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

Water spray should be used to cool containers.

EPO-TEK 353ND-T Part B

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

Use protective gloves, goggles and suitable protective clothing.

Environmental Precautions

Avoid release to the environment.

Spill Clean Up Methods

Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Absorb with sand or other inert absorbent. Transfer to a container for disposal.

Reference to other sections

For personal protection, see section 8.

7. HANDLING AND STORAGE

Handling

Avoid spilling, skin and eye contact. Do not eat, drink or smoke when using the product. Provide good ventilation.

Storage

Store at moderate temperatures in dry, well-ventilated area. Keep away from heat, sparks and open flame. Keep containers tightly closed. Store away from: Oxidizing material. Reducing Agents.

Specific end use(s)

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Protective Equipment



Engineering Measures

Provide adequate general and local exhaust ventilation.

Respiratory Equipment

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

Hand Protection

Use protective gloves.

Eye Protection

Wear approved safety goggles.

Other Protection

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapor 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. Wash promptly with soap & water if skin becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

EPO-TEK 353ND-T Part B

<u>Appearance</u>	Liquid
<u>Color</u>	Amber.
<u>Odor</u>	Slight odor.
<u>Solubility</u>	Slightly soluble in water.
<u>Bulk Density</u>	1.02 kg/m ³
<u>Vapor density (air=1)</u>	>1
<u>Evaporation rate</u>	<BuAc
<u>Flash point (°C)</u>	93
Not known.	

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 contact with oxidizers or reducing agents.

Materials To Avoid

Strong oxidizing substances. Strong reducing agents.

Hazardous Decomposition Products

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors. In case of fire, toxic gases (CO, CO₂, NO_x) may be formed.

11. TOXICOLOGICAL INFORMATION

Skin Corrosion/Irritation:

Corrosive to skin.

Serious eye damage/irritation:

Corrosive to eyes.

Reproductive Toxicity:

Possible reproductive impact.

Toxicological Information on Ingredients:

Imidazole (CAS: 288-32-4)

Toxic Dose 1 - LD 50
970 mg/kg (oral, rat)

12. ECOLOGICAL INFORMATION

Ecotoxicity

Not known.

Degradability

The product is moderately biodegradable.

Bioaccumulative potential

The product contains potentially bio-accumulating substances.

Mobility:

Semi-mobile.

Other adverse effects

Not known.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

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

14. TRANSPORT INFORMATION

EPO-TEK 353ND-T Part B

Road Transport Notes

Rail Transport Notes

Sea Transport Notes

Air Transport Notes

UN No. (DOT/TDG) UN3267

UN No. (IMDG) 3267

UN No. (ICAO) 3267

DOT Proper Shipping Name CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (Imidazole)

TDG Proper Shipping Name CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (Imidazole)

DOT Hazard Class

8

DOT Hazard Label

Corrosive

<u>TDG</u>	<u>Class</u>
	8

<u>TDG</u>	<u>Label(s)</u>
	8

<u>IMDG</u>	<u>Class</u>
	8

<u>ICAO</u>	<u>Class</u>
	8

Transport Labels



DOT Pack Group III

IMDG Pack Group III

Air Pack Group III

Environmentally Hazardous Substance/Marine Pollutant
No.

EMS F-A, S-B

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 RegulationsCalifornia Proposition 65 Carcinogens and Reproductive Toxins

WARNING: This product contains a substance known to the State of California to cause cancer and/or reproductive harm.

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 InventoriesEU - 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

All ingredients are listed or exempt.

Japan – MITI

All ingredients are listed or exempt.

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	
<u>Revision Date</u>	11 June 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.