



SAFETY DATA SHEET EPO-TEK 731 Part A

1. IDENTIFICATION

<u>Product Name</u>	EPO-TEK 731 Part A
<u>Product No.</u>	EPO-TEK 731 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 Danger

Hazard Statements

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
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.
P501	Dispose of contents/container in accordance with local regulations.

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 Dam. 1 - H318;Skin Sens. 1 - H317;STOT SE 2 - H335, H371;STOT SE 3 - H335, H371
Environment	Aquatic Chronic 2 - H411

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Inhalation

Harmful by inhalation. Gas or vapor in high concentrations may irritate respiratory system. Vapors may cause headache, fatigue, dizziness and nausea.

Ingestion

Harmful if swallowed. May cause stomach pain or vomiting. Ingestion may cause severe irritation of the mouth, the esophagus and the gastrointestinal tract.

Skin Contact

Harmful in contact with skin. Irritating to skin. May cause sensitization by skin contact.

Eye Contact

Risk of serious damage to eyes. Extreme irritation of eyes and mucous membranes, including burning and tearing. Risk of corneal damage.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Epoxy Resin Blend	60-100%
CAS No.: Proprietary	EC No.: Proprietary
GHS Classification Skin Irrit. 2 - H315; Eye Irrit. 2 - H319; 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	
Reactive Diluent Blend	10-30%
CAS No.: Proprietary	EC No.: Proprietary
GHS Classification Acute Tox. 4 - H302; Acute Tox. 4 - H312; Acute Tox. 4 - H332; Skin Irrit. 2 - H315; Eye Dam. 1 - H318; Skin Sens. 1 - H317	

4. FIRST-AID MEASURES

Description of first aid measures

General Information

Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

Inhalation

Move the exposed person to fresh air at once. Keep the affected person warm and at rest. Get prompt medical attention.

Ingestion

DO NOT INDUCE VOMITING! Immediately rinse mouth and provide fresh air. Get medical attention immediately!

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

Promptly wash eyes with plenty of water while lifting the eye lids. Make sure to remove any contact lenses from the eyes before rinsing. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

Most important symptoms and effects, both acute and delayed

Inhalation

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

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Ingestion

May cause stomach pain or vomiting. May cause chemical burns in mouth and throat.

Skin Contact

Severe 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) 93

Extinguishing Media

Fire can be extinguished using: Dry chemicals. Foam. Water spray.

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

Ventilate well. Wear necessary protective equipment. Absorb in vermiculite, dry sand or earth and place into containers.

Reference to other sections

For personal protection, see section 8.

7. HANDLING AND STORAGE

Handling

Avoid spilling, skin and eye contact. Do not handle broken packages without protective equipment. 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. 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
Polar Activator	ACGIH	200 ppm		250 ppm		Skin
Polar Activator	PEL	200 ppm	260 mg/m3			
COMPONENT						IDLH
Polar Activator						6000 ppm

ACGIH=American Conference of Governmental Industrial Hygienists.

Skin: Danger of cutaneous absorption. (ACGIH)

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 made of: Impermeable material.

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. Wash promptly with soap & water if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. 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>	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 heat, flames and other sources of ignition. Avoid excessive heat for prolonged periods of time.

Materials To Avoid

Strong oxidizing substances. Strong acids. Strong alkalis.

Hazardous Decomposition Products

High temperatures generate: Toxic gases/vapors/fumes of: Carbon dioxide (CO₂). Carbon monoxide (CO).

11. TOXICOLOGICAL INFORMATION

Toxicological Information on Ingredients:

Polar Activator (CAS: Proprietary)

Toxic Dose 1 - LD 50

6, 200 mg/kg (oral, rat)

Toxic Dose 2 - LD 50

15, 800 mg/kg (dermal, rabbit)

12. ECOLOGICAL INFORMATION

EPO-TEK 731 Part A

Ecotoxicity

The product contains a substance which is toxic to aquatic organisms and which 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. (Epoxy Resin Blend)
<u>TDG Proper Shipping Name</u>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy Resin Blend)
<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.

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 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)

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 InventoriesEU - 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.

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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 03/31/15

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 731 Part B

1. IDENTIFICATION

<u>Product Name</u>	EPO-TEK 731 Part B
<u>Product No.</u>	EPO-TEK 731 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>	Paste
<u>Color</u>	Tan.
<u>Odor</u>	Mild.
<u>GHS Pictogram</u>	



<u>Signal Word</u>	Warning
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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 .

Precautionary Statements

P271	Use only outdoors or in a well-ventilated area.
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.

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	Not classified.

Inhalation

Harmful by inhalation. Vapors may cause headache, fatigue, dizziness and nausea. Vapor may irritate respiratory system or lungs.

Ingestion

Harmful if swallowed. May cause stomach pain or vomiting. May cause chemical burns in mouth, oesophagus and stomach.

EPO-TEK 731 Part B

Skin Contact

Harmful in contact with skin. Irritating to skin. May cause sensitization by skin contact.

Eye Contact

Irritating and may cause redness and pain.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Curing Agent	1-5%
CAS No.: Proprietary	EC No.: Proprietary
GHS Classification Acute Tox. 4 - H312; Skin Corr. 1B - H314; Skin Sens. 1 - H317; Aquatic Chronic 3 - H412	
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	
Polyamide Resin	60-100%
CAS No.: Proprietary	EC No.: Proprietary
GHS Classification Skin Irrit. 2 - H315; Eye Irrit. 2 - H319; Skin Sens. 1 - H317	

4. FIRST-AID MEASURES

Description of first aid measures

Inhalation

Remove victim immediately from source of exposure. Move into fresh air and keep at rest. Get medical attention if any discomfort continues.

Ingestion

Remove victim immediately from source of exposure. Provide fresh air, warmth and rest, preferably in comfortable upright sitting position. Drink plenty of water. NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Get medical attention if any discomfort continues.

Skin Contact

Remove victim immediately from source of exposure. Wash skin thoroughly with soap and water for several minutes. Get medical attention if any discomfort continues.

Eye Contact

Remove victim immediately from source of exposure. Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Seek medical attention and bring these instructions.

Most important symptoms and effects, both acute and delayed

Inhalation

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

Ingestion

May cause stomach pain or vomiting.

Skin Contact

Skin irritation. Allergic rash.

Eye Contact

Irritating and may cause redness and pain.

EPO-TEK 731 Part B

Indication of any immediate medical attention and special treatment needed

Notes To The Physician

Treat Symptomatically.

5. FIRE-FIGHTING MEASURES

Flash point (°C) 185

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

Wear necessary protective equipment. Stop leak if possible without risk. Absorb in vermiculite, dry sand or earth and place into containers.

Flush contaminated area with plenty of water.

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. 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
Polar Activator	ACGIH	200 ppm		250 ppm		Skin
Polar Activator	PEL	200 ppm	260 mg/m3			
COMPONENT						IDLH
Polar Activator						6000 ppm

ACGIH=American Conference of Governmental Industrial Hygienists.

Skin: Danger of cutaneous absorption. (ACGIH)

Protective Equipment



EPO-TEK 731 Part B

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 made of: Impermeable material.

Eye Protection

Wear goggles/face shield.

Other Protection

Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene Measures

DO NOT SMOKE IN WORK AREA! Remove contaminated clothing and wash the skin thoroughly with soap and water after work. When using do not eat, drink or smoke. Wash hands at the end of each work shift and before eating, smoking and using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES

<u>Appearance</u>	Paste
<u>Color</u>	Tan.
<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>	185

10. STABILITY AND REACTIVITY

Reactivity

Reaction with: Strong oxidizing agents. Strong reducing agents.

Stability

Stable under normal temperature conditions and recommended use.

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

In case of fire, toxic gases (CO, CO₂, NO_x) may be formed.

11. TOXICOLOGICAL INFORMATION

Toxicological Information on Ingredients:

Polar Activator (CAS: Proprietary)

Toxic Dose 1 - LD 50

6, 200 mg/kg (oral, rat)

Toxic Dose 2 - LD 50

15, 800 mg/kg (dermal, rabbit)

12. ECOLOGICAL INFORMATION

Acute Toxicity - Fish

Not known.

Degradability

No data available.

Bioaccumulative potential

No data available on bioaccumulation.

Mobility:

The product has poor water-solubility.

EPO-TEK 731 Part B

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).

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.

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

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.

Curing Agent

Polar Activator

Rhode Island "Right To Know" List

The following ingredients are listed.

Polar Activator

EPO-TEK 731 Part B

Minnesota "Right To Know" List

The following ingredients are listed.

Polar Activator

New Jersey "Right To Know" List

The following ingredients are listed.

Curing Agent

Polar Activator

Pennsylvania "Right To Know" List

The following ingredients are listed.

Curing Agent

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

At least one ingredient is not listed.

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

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

Revision Date

03/31/2015

Revision

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.