

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Tuffbond® 304A	Product Type: Epoxy Adhesive
Company : Hernon Manufacturing, Inc. 121 Tech Drive Sanford, FL 32771	Contact Information: Telephone: 407-322-4000 Emergency Telephone: 800-255-3924 Web Site: www.hernon.com

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: Liquid
Color: Black
Odor: Unpleasant

HMIS:
HEALTH: 2*
FLAMMABILITY: 1
PHYSICAL HAZARD: 0
Personal Protection: See Section 8

WARNING: HARMFUL IF INHALED.
MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Primary Routes of Entry: Skin, inhalation, eyes

Signs and Symptoms of Exposure:

Inhalation: This material does not normally present an inhalation hazard, however, in applications where vapors (caused by high temperatures) or mists (caused by mixing) are created, breathing may cause a mild burning sensation in the nose, throat and lungs.

Eye Contact: May cause temporary discomfort or irritation to the eye. Contact with hot material can cause thermal burns which may result in permanent damage or blindness.

Skin Contact: May be slightly irritating to the skin. Repeated skin contact may result in an allergic skin reaction causing itching, burning, redness, and swelling. Contact with hot matter can cause thermal burns which may result in permanent damage.

Ingestion: Not expected to be a relevant route of exposure.

Existing Conditions Aggravated by Exposure: Eye, skin, and respiratory disorders.

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Ingredients</u>	<u>%</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER</u>
Epoxy resin	60-100	None	None	None
Carbon black	< 0.1	3.5 mg/m ³ TWA	3.5 mg/m ³ TWA	3.5 mg/m ³ TWA

4. FIRST AID MEASURES

Ingestion:	Do not induce vomiting. Keep individual calm. Obtain medical attention.
Inhalation:	Remove to fresh air. If symptoms develop and persist, get medical attention.
Skin Contact:	Wash with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if symptoms occur.
Eye Contact:	Flush with water for at least 15 minutes. Get medical attention.

5. FIRE FIGHTING MEASURES

Flash Point (TCC):	> 200°F
Recommended Extinguishing Agents:	Carbon dioxide, foam, dry chemical
Special Firefighting Procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. Water may be used to cool closed containers. High pressure stream will spread fire.
Hazardous Combustion Products:	Irritating organic vapors
Unusual Fire or Explosion Hazards:	None
Flammable/Explosive Limits – lower %:	NA
Flammable/Explosive Limits – upper %:	NA

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Wear proper protective equipment
Measures for Environmental Protection:	Do not allow entry into drains or surface waters
Clean-up Measures:	Soak up with an inert absorbent. Store in partly filled, closed container until disposal.

7. HANDLING AND STORAGE

Handling:	Avoid contact with eyes, skin and clothing. Avoid breathing vapor and mist. Wash thoroughly after handling. Use only with adequate ventilation.
Storage:	Store between 46° and 85°F unless otherwise labeled to preserve shelf life.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Eye/Face Protection:	Safety glasses or goggles with side shields
Skin Protection:	Use rubber or plastic gloves, and protective clothing as necessary
Respiratory Protection:	Use NIOSH approved respirator if there is a potential to exceed exposure limits
Engineering Controls:	Forced ventilation may be required if concentrations exceed exposure limits

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Color:	Black
Odor:	Unpleasant
Vapor Pressure:	> 50 mm at 80°F
Vapor Density:	Not available
Solubility in Water:	Slight
Specific Gravity:	1.17
Boiling Point:	More than 300°F
Volatile Organic Compound Content	Not available
Evaporation Rate (Ether = 1)	Not available
pH:	Does not apply

10. STABILITY AND REACTIVITY

Stability:	Stable
Hazardous Polymerization:	Will not occur
Hazardous Decomposition Products:	None
Incompatibility:	None

11. TOXICOLOGICAL INFORMATION

Ingredients:	Literature Referenced Target Organ and Other Health Effects	Carcinogen Status		
		NTP	IARC	OSHA
Epoxy resin	IRR	NO	NO	NO
Carbon black	RES	NO	2B	NO

Abbreviations:

IRR Irritant RES Respiratory 2B Suspect carcinogen

12. ECOLOGICAL INFORMATION

Ecological Information: Not available

13. DISPOSAL CONSIDERATIONS

Recommended methods of disposal: Dispose of according to Federal, State and Local regulations.
EPA Hazardous Waste Number: Not an RCRA hazardous waste

14. TRANSPORTATION INFORMATION

U.S. Dept. of Transportation Ground (49 CFR):

Proper Shipping Name	Unrestricted
Hazard Class or Division:	None
Identification Number	None
Packing group:	None

International Air Transportation (ICAO/IATA):

Proper Shipping Name:	Unrestricted
Hazard Class or Division:	None
Identification Number	None
Packing group:	None

Water Transportation (IMO/IMDG):

Proper Shipping Name:	Unrestricted
Hazard Class or Division:	None
Identification Number	None
Packing group:	None
Marine pollutant:	None

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status:	All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory
CERCLA/SARA 313:	This product contains the following chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372): None
California Proposition 65:	This product contains trace quantities of a chemical (or chemicals) known to the state of California to cause cancer, birth defects, and/or other reproductive harm – Carbon black

16. OTHER INFORMATION

Prepared By:	C. Alt
Title:	Manager - Quality & Development

DISCLAIMER: Some of the information presented is from sources other than direct test data on the product itself. The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Tuffbond® 304B	Product Type: Hardener
Company : Hernon Manufacturing, Inc. 121 Tech Drive Sanford, FL 32771	Contact Information: Telephone: 407-322-4000 Emergency Telephone: 800-255-3924 Web Site: www.hernon.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: Liquid
Color: Yellow
Odor: Unpleasant

HMIS:
HEALTH: 2*
FLAMMABILITY: 1
PHYSICAL HAZARD: 0
Personal Protection: See Section 8

WARNING: CORROSIVE LIQUID.
MAY BE IRRITATING TO EYES AND SKIN.
MAY BE HARMFUL IF SWALLOWED

Primary Routes of Entry: Skin, inhalation, ingestion

Signs and Symptoms of Exposure:

Inhalation: Mist or vapor can cause irritation of respiratory tract and burns to mucous membranes. Possible allergic reaction.

Eye Contact: May cause severe irritation and burns.

Skin Contact: May cause severe irritation and burns. Possible allergic reaction.

Ingestion: May cause gastrointestinal tract irritation, nausea, vomiting, diarrhea and possible ulcerations to mucous membranes.

Existing Conditions Aggravated by Exposure: Skin, eye, and lung

3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Ingredients</u>	<u>%</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER</u>
Mercaptan Terminated Polymer	80-100	None Established	None Established	None Established
Substituted Aminophenol	10-20	None Established	None Established	None Established

4. FIRST AID MEASURES

Ingestion:	Do not induce vomiting. Give large amounts of water followed by milk if available. If vomiting should occur spontaneously, keep airway clear. Get medical attention. Never give anything by mouth to an unconscious person.
Inhalation:	Remove to fresh air. If symptoms develop and persist, get medical attention.
Skin Contact:	Wash immediately with plenty of water. Remove contaminated clothing and footwear. Wash clothing before reuse. Discard footwear that has been contaminated on the inner surfaces. Seek immediate medical attention.
Eye Contact:	Immediately flush with plenty of water for at least 20 minutes holding eyelids apart to ensure flushing of the entire surface. Washing within one minute is essential to achieve maximum effectiveness. Get medical attention immediately.

5. FIRE FIGHTING MEASURES

Flash Point (TCC):	> 200°F
Recommended Extinguishing Agents:	Carbon dioxide, foam, dry chemical, or water fog
Special Firefighting Procedures:	Cool exposed containers with water spray. Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Hazardous Combustion Products:	Carbon monoxide, carbon dioxide, nitrogen oxides.
Unusual Fire or Explosion Hazards:	Corrosive liquid
Flammable/Explosive Limits – lower %:	Not determined
Flammable/Explosive Limits – upper %:	Not determined

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Wear proper protective equipment
Measures for Environmental Protection:	Do not allow entry into drains or surface waters
Clean-up Measures:	Soak up with absorbent material and place in labeled containers for recovery or disposal. Wear adequate personal protective clothing and equipment.

7. HANDLING AND STORAGE

Handling:	Avoid contact with eyes, skin and clothing. Avoid breathing vapor and mist. Wash thoroughly after handling. Use only with adequate ventilation.
Storage:	Store in cool, dry, well ventilated areas away from heat and sunlight. Isolate from substances which may release corrosive, toxic or flammable compounds on reaction to this product. Do not store near epoxy resins. Protect containers from damage.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Eye/Face Protection:	Safety glasses or goggles with side shields
Skin Protection:	Use appropriate chemical resistant gloves, and protective clothing as necessary
Respiratory Protection:	Use NIOSH approved respirator if there is a potential to exceed exposure limits
Engineering Controls:	Forced ventilation may be required if concentrations exceed exposure limits

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Color:	Yellow
Odor:	Unpleasant
Vapor Pressure:	Not available
Vapor Density:	Not available
Solubility in Water:	Low
Specific Gravity:	1.13
Boiling Point:	More than 300°F
Volatile Organic Compound Content	7.3%
Evaporation Rate (Ether = 1)	Not available
pH:	Does not apply

10. STABILITY AND REACTIVITY

Stability:	Stable
Hazardous Polymerization:	Will not occur
Hazardous Decomposition Products:	None expected
Incompatibility:	Strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION

Ingredients:	Literature Referenced Target Organ and Other Health Effects	Carcinogen Status		
		NTP	IARC	OSHA
Polymercaptan	No data	NO	NO	NO
Substituted Aminophenol	IRR	NO	NO	NO

Abbreviations:

IRR Irritant

12. ECOLOGICAL INFORMATION

Ecological Information: Not available

13. DISPOSAL CONSIDERATIONS

Recommended methods of disposal: Dispose of according to Federal, State and Local regulations.
EPA Hazardous Waste Number: Not an RCRA hazardous waste

14. TRANSPORTATION INFORMATION

U.S. Dept. of Transportation Ground (49 CFR):

Proper Shipping Name: AMINES, LIQUID, CORROSIVE, N.O.S. (tris-2,4,6-(dimethylamino-methyl)phenol)
Hazard Class or Division: 8
Identification Number: UN2735
Packing group: III

International Air Transportation (ICAO/IATA):

Proper Shipping Name: AMINES, LIQUID, CORROSIVE, N.O.S. (tris-2,4,6-(dimethylamino-methyl)phenol)
Hazard Class or Division: 8
Identification Number: UN2735
Packing group: III

WaterTransportation (IMO/IMDG):

Proper Shipping Name: AMINES, LIQUID, CORROSIVE, N.O.S. (tris-2,4,6-(dimethylamino-methyl)phenol)
Hazard Class or Division: 8
Identification Number: UN2735
Packing group: III

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory
CERCLA/SARA 313: This product contains the following chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372): None

16. OTHER INFORMATION

Prepared By: C. Alt
Title: Manager - Quality & Development

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