

Issue Date 08-Jun-2015

Revision Date 06-Oct-2015

Version 1

## 1. IDENTIFICATION

### Product identifier

**Product Name** Tuffbond 323A

### Other means of identification

**Product Code** MS-323A

**UN/ID no.** None

**Synonyms** None

### Recommended use of the chemical and restrictions on use

**Recommended Use** Epoxy Adhesive.

**Uses advised against** None known

### Details of the supplier of the safety data sheet

#### **Manufacturer Address**

Hernon Manufacturing Inc.  
121 Tech Drive  
Sanford, FL 32771  
800-527-0004

### Emergency telephone number

**Company Phone Number** 407-322-4000

**Emergency Telephone** Chemtel 800-255-3924

## 2. HAZARDS IDENTIFICATION

### Classification

#### **OSHA Regulatory Status**

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitization	Category 1
Category 4	

### Label elements

#### **Emergency Overview**

##### **Warning**

##### **Hazard statements**

Causes skin irritation

Causes serious eye irritation

May cause respiratory irritation

Toxic to aquatic life with long lasting effects

May cause an allergic skin reaction

**Appearance** No information available**Physical state** liquid**Odor** unpleasant**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
 Avoid breathing dust/fume/gas/mist/vapors/spray  
 Contaminated work clothing must not be allowed out of the workplace  
 Keep away from flames and hot surfaces. - No smoking  
 Wear protective gloves/eye protection/face protection

**Precautionary Statements - Response**

Call a POISON CENTER or doctor/physician if you feel unwell  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 If eye irritation persists: Get medical advice/attention  
 IF ON SKIN: Wash with plenty of water and soap  
 Take off contaminated clothing and wash it before reuse  
 If skin irritation or rash occurs: Get medical advice/attention  
 In case of fire: Use CO<sub>2</sub>, dry chemical, or foam to extinguish

**Precautionary Statements - Storage**

Store in a well-ventilated place. Keep cool

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Not applicable

**Other Information**

Not applicable

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance**

Chemical Name	CAS No.	Weight-%	Trade Secret
Epoxy Resin / Bisphenyl A epoxy resin	25068-38-6	50-60	*
Flexibilizer	Proprietary	30-40	*
Glycol diglycidyl ether	17557-23-2	5 - 10	*
Alkyl glycidyl ether	68609-97-2	5 - 10	*
Carbon black	1333-86-4	<0.1	*

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

### 4. FIRST AID MEASURES

**Description of first aid measures**

**Eye contact** Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

**Skin contact** Wash with soap and water. Flush skin with water for several minutes. Remove

contaminated clothing and shoes. If irritation develops, seek medical attention. Wash clothing before reuse.

**Inhalation**

Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get medical attention immediately.

**Ingestion**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a POISON CENTER or doctor/physician if you feel unwell.

**Most important symptoms and effects, both acute and delayed****Symptoms**

No information available.

**Indication of any immediate medical attention and special treatment needed****Note to physicians**

Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media**

Use CO<sub>2</sub>, dry chemical, or foam.

**Unsuitable extinguishing media** Do not use a solid water stream as it may scatter and spread fire.

**Specific hazards arising from the chemical**

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

**Hazardous combustion products** Irritating organic vapors.

**Explosion data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures****Personal precautions**

Use personal protective equipment as required. Ensure adequate ventilation, especially in confined areas.

**For emergency responders**

Use personal protection recommended in Section 8.

**Environmental precautions****Environmental precautions**

Do not allow into any sewer, on the ground or into any body of water. Collect spillage. See Section 12 for additional ecological information.

**Methods and material for containment and cleaning up****Methods for containment**

Soak up condensate with inert absorbent material and collect in ventilated waste container for disposal.

**Methods for cleaning up**

Soak up with inert absorbent material. Take up mechanically, placing in appropriate containers for disposal.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Advice on safe handling** Ensure adequate ventilation, especially in confined areas. Avoid breathing vapors or mists. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep at temperatures between 7 and 29 °C.

**Incompatible materials** None.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

**Exposure Guidelines** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
CARBON BLACK 1333-86-4	TWA: 3 mg/m <sup>3</sup> inhalable fraction	TWA: 3.5 mg/m <sup>3</sup> (vacated) TWA: 3.5 mg/m <sup>3</sup>	IDLH: 1750 mg/m <sup>3</sup> TWA: 3.5 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup> Carbon black in presence of Polycyclic aromatic hydrocarbons PAH

### Appropriate engineering controls

**Engineering Controls** Showers  
Eyewash stations  
Ventilation systems.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin and body protection** Wear protective gloves and protective clothing. Use rubber or plastic gloves.

**Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical state</b>	liquid	<b>Odor</b>	unpleasant
<b>Appearance</b>	No information available	<b>Odor threshold</b>	No information available
<b>Color</b>	black		

### Property

<b>pH</b>	Does not apply
<b>Melting point / freezing point</b>	No information available
<b>Boiling point / boiling range</b>	> 149 °C / 300 °F
<b>Flash point</b>	> 93 °C / 200 °F
<b>Evaporation rate</b>	No information available
<b>Flammability (solid, gas)</b>	No information available
<b>Flammability Limit in Air</b>	

### Remarks • Method

<b>Upper flammability limit:</b>	No information available
<b>Lower flammability limit:</b>	No information available
<b>Vapor pressure</b>	No information available
<b>Vapor density</b>	No information available
<b>Relative density</b>	1.11
<b>Water solubility</b>	None
<b>Solubility in other solvents</b>	No information available
<b>Partition coefficient</b>	No information available
<b>Autoignition temperature</b>	No information available
<b>Decomposition temperature</b>	No information available
<b>Kinematic viscosity</b>	No information available
<b>Dynamic viscosity</b>	No information available
<b>Explosive properties</b>	No information available
<b>Oxidizing properties</b>	No information available

**Other Information**

<b>Softening point</b>	No information available
<b>Molecular weight</b>	No information available
<b>VOC Content (%)</b>	No information available
<b>Density</b>	No information available
<b>Bulk density</b>	No information available

<b>10. STABILITY AND REACTIVITY</b>
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**Reactivity**

No data available

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**

None under normal processing.

<b>Hazardous polymerization</b>	Hazardous polymerization does not occur.
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**Conditions to avoid**

None known.

**Incompatible materials**

None.

**Hazardous Decomposition Products**

None.

<b>11. TOXICOLOGICAL INFORMATION</b>
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**Information on likely routes of exposure**

<b>Product Information</b>	No data available
<b>Inhalation</b>	No data available.
<b>Eye contact</b>	Irritating to eyes.
<b>Skin contact</b>	May cause skin irritation and/or dermatitis.
<b>Ingestion</b>	No data available.

<b>Chemical Name</b>	<b>Oral LD50</b>	<b>Dermal LD50</b>	<b>Inhalation LC50</b>
Epoxy Resin /Bisphenyl A epoxy resin 25068-38-6	= 11400 mg/kg ( Rat )	-	-
Flexibilizer	= 11400 mg/kg ( Rat )	-	-

Glycol diglycidyl ether 17557-23-2	= 4500 mg/kg ( Rat )	-	-
Alkyl glycidyl ether 68609-97-2	= 17100 mg/kg ( Rat )	-	-
CARBON BLACK 1333-86-4	> 15400 mg/kg ( Rat )	> 3 g/kg ( Rabbit )	-

**Information on toxicological effects**

**Symptoms** No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Sensitization** No information available.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** No information available.

Chemical Name	ACGIH	IARC	NTP	OSHA
CARBON BLACK 1333-86-4	A3	Group 2B	-	X

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Aspiration hazard** No information available.

**Numerical measures of toxicity - Product Information**

The following values are calculated based on chapter 3.1 of the GHS document.

ATEmix (oral) 10,304.00 mg/kg

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

Toxic to aquatic life with long lasting effects

Chemical Name	Algae/aquatic plants	Fish	Crustacea
CARBON BLACK 1333-86-4	-	-	5600: 24 h Daphnia magna mg/L EC50

**Persistence and degradability**

No information available.

**Bioaccumulation**

No information available.

**Other adverse effects**

No information available

## 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods**

**Disposal of wastes** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated packaging** Do not reuse container.

## 14. TRANSPORT INFORMATION

**DOT** Not regulated

<b>UNID no.</b>	None
<b>Proper shipping name</b>	Not regulated
<b>Hazard Class</b>	None
<b>Subsidiary class</b>	None
<b>Packing Group</b>	None
<b>Reportable Quantity (RQ)</b>	None
<b>Special Provisions</b>	None

<b><u>IATA</u></b>	Not regulated
<b>UNID no.</b>	None
<b>Proper shipping name</b>	None
<b>Hazard Class</b>	None
<b>Subsidiary hazard class</b>	None
<b>Packing Group</b>	None
<b>Special Provisions</b>	None

<b><u>IMDG</u></b>	Not regulated
<b>UNID no.</b>	None
<b>Proper shipping name</b>	Not regulated
<b>Hazard Class</b>	None
<b>Subsidiary hazard class</b>	None
<b>Packing Group</b>	None

<b><u>RID</u></b>	Not regulated
<b>UNID no.</b>	None
<b>Proper shipping name</b>	Not regulated
<b>Hazard Class</b>	None
<b>Packing Group</b>	None
<b>Special Provisions</b>	None

<b><u>ADR</u></b>	Not regulated
<b>UNID no.</b>	None
<b>Proper shipping name</b>	Not regulated
<b>Hazard Class</b>	None
<b>Packing Group</b>	None
<b>Classification code</b>	None
<b>Special Provisions</b>	None

## 15. REGULATORY INFORMATION

### International Inventories

<b>TSCA</b>	Complies
<b>DSL/NDSL</b>	Complies
<b>EINECS/ELINCS</b>	Complies
<b>ENCS</b>	Complies
<b>IECSC</b>	Complies
<b>KECL</b>	Complies
<b>PICCS</b>	Complies
<b>AICS</b>	Complies

All ingredients are on the inventory or are exempt from listing.

### Legend:

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances

**US Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazard Categories**

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

**US State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals

Chemical Name	California Proposition 65
CARBON BLACK - 1333-86-4	Carcinogen

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
CARBON BLACK 1333-86-4	X	X	X

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

**16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION**

<b><u>NFPA</u></b>	Health hazards 0	Flammability 0	Instability 0	Physical and Chemical Properties -
<b><u>HMIS</u></b>	Health hazards 0	Flammability 0	Physical hazards 0	Personal protection X

Prepared By SDS coordinator  
 Issue Date 08-Jun-2015  
 Revision Date 06-Oct-2015  
 Revision Note

No information available

**Disclaimer**

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**



Issue Date 08-Jun-2015

Revision Date 06-Oct-2015

Version 1

**1. IDENTIFICATION****Product identifier****Product Name** Tuffbond 323B**Other means of identification****Product Code** MS-323B**UN/ID no.** UN 2753**Synonyms** None**Recommended use of the chemical and restrictions on use****Recommended Use** Hardener.**Uses advised against** None known**Details of the supplier of the safety data sheet****Manufacturer Address**Hernon Manufacturing Inc.  
121 Tech Drive  
Sanford, FL 32771  
800-527-0004**Emergency telephone number****Company Phone Number** 407-322-4000**Emergency Telephone** Chemtel 800-255-3924**2. HAZARDS IDENTIFICATION****Classification****OSHA Regulatory Status**

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Acute toxicity - Inhalation (Gases)	Category 4
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Reproductive toxicity	Category 2
Category 4	

**Label elements****Emergency Overview****Warning****Hazard statements**

Harmful if swallowed

Harmful in contact with skin

Harmful if inhaled

Causes severe skin burns and eye damage

Suspected of damaging fertility or the unborn child

**Appearance** No information available**Physical state** liquid**Odor** Aminic**Precautionary Statements - Prevention**

Obtain special instructions before use  
 Do not handle until all safety precautions have been read and understood  
 Wear protective gloves/protective clothing/eye protection/face protection  
 Wash face, hands and any exposed skin thoroughly after handling  
 Do not eat, drink or smoke when using this product  
 Use only outdoors or in a well-ventilated area  
 Do not breathe dusts or mists  
 Keep away from flames and hot surfaces. - No smoking

**Precautionary Statements - Response**

Call a POISON CENTER or doctor/physician if you feel unwell  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower  
 Wash contaminated clothing before reuse  
 IF INHALED: Remove person to fresh air and keep comfortable for breathing  
 IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell  
 Rinse mouth  
 Do NOT induce vomiting  
 In case of fire: Use CO<sub>2</sub>, dry chemical, or foam to extinguish

**Precautionary Statements - Storage**

Store in a well-ventilated place. Keep cool

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Not applicable

**Other Information**

Very toxic to aquatic life with long lasting effects

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance**

Chemical Name	CAS No.	Weight-%	Trade Secret
Aliphatic Amines	Proprietary	60 - 100	*
Benzyl alcohol	100-51-6	10 - 30	*

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

### 4. FIRST AID MEASURES

**Description of first aid measures****Eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.  
 Consult a physician.

<b>Skin contact</b>	Wash with soap and water. Flush skin with water for several minutes. Remove contaminated clothing and shoes. If irritation develops, seek medical attention. Wash clothing before reuse.
<b>Inhalation</b>	Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get medical attention immediately.
<b>Ingestion</b>	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a POISON CENTER or doctor/physician if you feel unwell.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** No information available.

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

**Note to physicians** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media**

Use CO<sub>2</sub>, dry chemical, or foam.

**Unsuitable extinguishing media** Do not use a solid water stream as it may scatter and spread fire.

**Specific hazards arising from the chemical**

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

**Hazardous combustion products** Irritating organic vapors.

**Explosion data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Use personal protective equipment as required. Ensure adequate ventilation, especially in confined areas.

**For emergency responders** Use personal protection recommended in Section 8.

**Environmental precautions**

**Environmental precautions** Do not allow into any sewer, on the ground or into any body of water. Collect spillage. See Section 12 for additional ecological information.

**Methods and material for containment and cleaning up**

**Methods for containment** Soak up condensate with inert absorbent material and collect in ventilated waste container for disposal.

**Methods for cleaning up** Take up mechanically, placing in appropriate containers for disposal.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Advice on safe handling** Avoid contact with skin, eyes or clothing. Avoid breathing vapors or mists. Wash thoroughly after handling. Ensure adequate ventilation, especially in confined areas.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep at temperatures between 7 and 29 °C.

**Incompatible materials** Sodium hypochlorite. Organic acids. Mineral acids. Peroxides.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

**Exposure Guidelines** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

### Appropriate engineering controls

**Engineering Controls** Showers  
Eyewash stations  
Ventilation systems.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin and body protection** Wear protective gloves and protective clothing. Use rubber or plastic gloves.

**Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical state</b>	liquid	<b>Odor</b>	Aminic
<b>Appearance</b>	No information available	<b>Odor threshold</b>	No information available
<b>Color</b>	pale yellow		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	Does not apply	
<b>Melting point / freezing point</b>	No information available	
<b>Boiling point / boiling range</b>	> 149 / 300 °F	
<b>Flash point</b>	> 93 °C / 200 °F	
<b>Evaporation rate</b>	No information available	
<b>Flammability (solid, gas)</b>	No information available	
<b>Flammability Limit in Air</b>		
<b>Upper flammability limit:</b>	No information available	
<b>Lower flammability limit:</b>	No information available	
<b>Vapor pressure</b>	< 2 mm at 70°F	
<b>Vapor density</b>	No information available	
<b>Relative density</b>	0.99	

<b>Water solubility</b>	slightly soluble
<b>Solubility in other solvents</b>	No information available
<b>Partition coefficient</b>	No information available
<b>Autoignition temperature</b>	No information available
<b>Decomposition temperature</b>	No information available
<b>Kinematic viscosity</b>	No information available
<b>Dynamic viscosity</b>	No information available
<b>Explosive properties</b>	No information available
<b>Oxidizing properties</b>	No information available

**Other Information**

<b>Softening point</b>	No information available
<b>Molecular weight</b>	No information available
<b>VOC Content (%)</b>	No information available
<b>Density</b>	No information available
<b>Bulk density</b>	No information available

## 10. STABILITY AND REACTIVITY

**Reactivity**

No data available

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**

None under normal processing.

**Conditions to avoid**

None known based on information supplied.

**Incompatible materials**

Sodium hypochlorite. Organic acids. Mineral acids. Peroxides.

**Hazardous Decomposition Products**

Carbon oxides. Nitrogen oxides (NOx). Thermal decomposition can lead to release of irritating and toxic gases and vapors.

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

<b>Product Information</b>	No data available
<b>Inhalation</b>	No data available.
<b>Eye contact</b>	Irritating to eyes.
<b>Skin contact</b>	May cause skin irritation and/or dermatitis.
<b>Ingestion</b>	No data available.

<b>Chemical Name</b>	<b>Oral LD50</b>	<b>Dermal LD50</b>	<b>Inhalation LC50</b>
Aliphatic Amines	= 580 mg/kg ( Rat )	= 2031 mg/kg ( Rabbit )	-
Benzyl alcohol 100-51-6	= 1230 mg/kg ( Rat )	= 2 g/kg ( Rabbit )	= 8.8 mg/L ( Rat ) 4 h

**Information on toxicological effects****Symptoms** No information available.**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Sensitization</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	No information available.
<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Aspiration hazard</b>	No information available.

#### Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document.

<b>ATEmix (oral)</b>	592.00 mg/kg
<b>ATEmix (dermal)</b>	1,875.00 mg/kg
<b>ATEmix (inhalation-gas)</b>	3,684.00 mg/l
<b>ATEmix (inhalation-dust/mist)</b>	7.90 mg/l

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Aliphatic Amines	0.41: 96 h Pseudokirchneriella subcapitata mg/L EC50 1.3: 72 h Desmodesmus subspicatus mg/L EC50	0.135: 96 h Pimephales promelas mg/L LC50 flow-through	0.14: 48 h Daphnia magna mg/L EC50 0.17 - 0.21: 48 h Daphnia magna mg/L EC50 Static 0.0874 - 0.124: 48 h Daphnia magna mg/L EC50 semi-static
Benzyl alcohol 100-51-6	35: 3 h Anabaena variabilis mg/L EC50	460: 96 h Pimephales promelas mg/L LC50 static 10: 96 h Lepomis macrochirus mg/L LC50 static	23: 48 h water flea mg/L EC50

### Persistence and degradability

No information available.

### Bioaccumulation

No information available.

Chemical Name	Partition coefficient
Aliphatic Amines	3.28
Benzyl alcohol 100-51-6	1.1

### Other adverse effects

No information available

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

**Disposal of wastes** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated packaging** Do not reuse container.

## 14. TRANSPORT INFORMATION

### DOT

**UN/ID no.** UN 2753

<b>Proper shipping name</b>	Amines, liquid, corrosive, n.o.s. (4,4'-Methylenebis(cyclohexyl)amine, Nonylphenol)
<b>Hazard Class</b>	8
<b>Packing Group</b>	III
<b>Special Provisions</b>	None

**IATA**

<b>UN/ID no.</b>	UN 2753
<b>Proper shipping name</b>	Amines, liquid, corrosive, n.o.s. (4,4'-Methylenebis(cyclohexyl)amine, Nonylphenol)
<b>Hazard Class</b>	8
<b>Packing Group</b>	III
<b>Special Provisions</b>	None

**IMDG**

<b>UN/ID no.</b>	UN 2753
<b>Proper shipping name</b>	Amines, liquid, corrosive, n.o.s. (4,4'-Methylenebis(cyclohexyl)amine, Nonylphenol)
<b>Hazard Class</b>	8
<b>Packing Group</b>	III
<b>Special Provisions</b>	None
<b>Marine pollutant</b>	None

**RID**

<b>UN/ID no.</b>	UN 2753
<b>Proper shipping name</b>	Amines, liquid, corrosive, n.o.s. (4,4'-Methylenebis(cyclohexyl)amine, Nonylphenol)
<b>Hazard Class</b>	8
<b>Packing Group</b>	III
<b>Special Provisions</b>	None

**ADR**

<b>UN/ID no.</b>	UN 2753
<b>Proper shipping name</b>	Amines, liquid, corrosive, n.o.s. (4,4'-Methylenebis(cyclohexyl)amine, Nonylphenol)
<b>Hazard Class</b>	8
<b>Packing Group</b>	III
<b>Special Provisions</b>	None

<b>15. REGULATORY INFORMATION</b>
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**International Inventories**

<b>TSCA</b>	Complies
<b>DSL/NDSL</b>	Complies
<b>EINECS/ELINCS</b>	Complies
<b>ENCS</b>	Complies
<b>IECSC</b>	Complies
<b>KECL</b>	Complies
<b>PICCS</b>	Complies
<b>AICS</b>	Complies

All ingredients are on the inventory or are exempt from listing.

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances

**US Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
Aliphatic Amines -	1.0

**SARA 311/312 Hazard Categories**

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

**US State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Aliphatic Amines	-	X	X
Benzyl alcohol 100-51-6	-	X	X

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

**16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION**

<b>NFPA</b>	Health hazards 0	Flammability 0	Instability 0	Physical and Chemical Properties -
<b>HMIS</b>	Health hazards 0	Flammability 0	Physical hazards 0	Personal protection X

Prepared By SDS coordinator

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**Revision Note**

No information available

**Disclaimer**

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet