

### SECTION 1: Identification

#### 1.1. Product identifier

Product name : VB 225™ FS Part A (Resin)  
Product code : Not available.

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Epoxy binder.

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

Penetron Specialty Products Inc.  
601 S. 10th Street, Unit 300  
Allentown, PA 18103 - USA  
+1 (631) 941-9700  
info@penetransp.com – www.penetronsp.com

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC: US and Canada: 1-800-424-9300; International +1 703-527-3887

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Skin Irritation 2  
Eye Irritation 2A  
Skin Sensitization 1

#### 2.2. Label elements

##### GHS-US labelling

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) : Warning  
Hazard statements (GHS-US) : Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction.  
Precautionary statements (GHS-US) : Wash hands thoroughly after handling. Avoid breathing dust/fume/gas/mist/vapors/spray. Wear protective gloves/eye protection/face protection. Contaminated work clothing must not be allowed out of the workplace. If on skin: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention. 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. Dispose of contents/container in accordance with local/regional/national/international regulations.

#### 2.3. Other hazards

No additional information available.

#### 2.4. Unknown acute toxicity (GHS-US)

Not applicable.

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Not applicable.

#### 3.2. Mixture

Name	Product identifier	%
Bisphenol A-epichlorohydrin polymer	(CAS No) 25068-38-6	50 - 100
Phenol, 2,2'-methylenebis-, polymer with (chloromethyl)oxirane	(CAS No) 55492-52-9	25 - 50
Alkyl (C12-14) glycidyl ether	(CAS No) 68609-97-2	10 - 25

\* The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

# VB 225™ FS Part A (Resin)

## Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

### SECTION 4: First aid measures

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#### 4.1. Description of first-aid measures

- First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
- First-aid measures after skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.
- First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. If irritation persists, get medical attention.
- First-aid measures after ingestion : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

#### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after inhalation : May cause respiratory tract irritation.
- Symptoms/injuries after skin contact : Causes skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. May cause sensitization by skin contact.
- Symptoms/injuries after eye contact : Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
- Symptoms/injuries after ingestion : May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

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

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

### SECTION 5: Firefighting measures

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#### 5.1. Extinguishing media

- Suitable extinguishing media : Carbon dioxide. Extinguishing powder. Water jet. Alcohol resistant foam.
- Unsuitable extinguishing media : Full water jet.

#### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon and toxic gases.

#### 5.3. Advice for firefighters

- Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

### SECTION 6: Accidental release measures

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#### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

#### 6.2. Methods and material for containment and cleaning up

- For containment : Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).
- Methods for cleaning up : Scoop up material and place in a disposal container. Clean contaminated surfaces thoroughly. Provide ventilation.

#### 6.3. Reference to other sections

See Section 8 for further information on protective clothing and equipment and Section 13 for advice on waste disposal.

### SECTION 7: Handling and storage

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#### 7.1. Precautions for safe handling

- Precautions for safe handling : Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke.
- Hygiene measures : Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

#### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep out of the reach of children. Keep container tightly closed. Store in original container. Keep away from food, drink and animal feed.

#### 7.3. Specific end use(s)

Not available.

# VB 225™ FS Part A (Resin)

## Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Bisphenol A-epichlorohydrin polymer (25068-38-6)	
ACGIH	Not applicable
OSHA	Not applicable

Phenol, 2,2'-methylenebis-, polymer with (chloromethyl)oxirane (55492-52-9)	
ACGIH	Not applicable
OSHA	Not applicable

Alkyl (C12-14) glycidyl ether (68609-97-2)	
ACGIH	Not applicable
OSHA	Not applicable

#### 8.2. Exposure controls

Appropriate engineering controls	: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.
Hand protection	: Protective gloves made of rubber or PVC.
Eye protection	: Wear safety glasses with side shields or goggles.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Environmental exposure controls	: Maintain levels below Community environmental protection thresholds.
Other information	: Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Yellowish fluid
Color	: Yellow
Odor	: Weak, characteristic
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: > 392 °F (> 200 °C)
Flash point	: > 302 °F (> 150 °C)
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not flammable
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Vapor pressure	: No data available
Relative density	: 1.1 g/cm <sup>3</sup> @ 73.4 °F (23 °C)
Relative vapor density at 20 °C	: No data available
Solubility	: Not miscible or difficult to mix
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 950 mPas @ 77 °F (25 °C)

# VB 225™ FS Part A (Resin)

## Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

### 9.2. Other information

No additional information available.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No dangerous reaction known under conditions of normal use.

### 10.2. Chemical stability

Stable under normal storage conditions.

### 10.3. Possibility of hazardous reactions

Reacts with strong oxidizing agents, alkalis, amines and acids.

### 10.4. Conditions to avoid

Heat. Incompatible materials.

### 10.5. Incompatible materials

Strong oxidizing agents. Alkalis. Amines. Acids.

### 10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon and toxic gases.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

VB 225™ FS Part A (Resin)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat	No data available
Bisphenol A-epichlorohydrin polymer (25068-38-6)	
LD50 oral rat	11400 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
Phenol, 2,2'-methylenebis-, polymer with (chloromethyl)oxirane (55492-52-9)	
LD50 oral rat	> 5000 mg/kg
Alkyl (C12-14) glycidyl ether (68609-97-2)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 4500 mg/kg

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Based on available data, the classification criteria are not met.
Carcinogenicity	: Based on available data, the classification criteria are not met.
Reproductive toxicity	: Based on available data, the classification criteria are not met.
Specific target organ toxicity (single exposure)	: Based on available data, the classification criteria are not met.
Specific target organ toxicity (repeated exposure)	: Based on available data, the classification criteria are not met.
Aspiration hazard	: Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation	: May cause respiratory tract irritation.
Symptoms/injuries after skin contact	: Causes skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. May cause sensitization by skin contact.
Symptoms/injuries after eye contact	: Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Symptoms/injuries after ingestion	: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects.

# VB 225™ FS Part A (Resin)

## Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

### 12.2. Persistence and degradability

VB 225™ FS Part A (Resin)	
Persistence and degradability	Not established.

### 12.3. Bioaccumulative potential

VB 225™ FS Part A (Resin)	
Bioaccumulative potential	Not established.

### 12.4. Mobility in soil

No additional information available.

### 12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

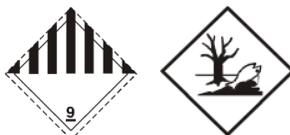
## SECTION 14: Transport information

### 14.1 DOT

Non-regulated material

### 14.2 ADR

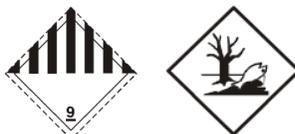
UN Number : UN3082  
Proper shipping name : 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)  
Transport hazard class(es) : 9 (M6) Miscellaneous dangerous substances and articles  
Label 9



Packing group : III  
Marine pollutant : Yes

### 14.3 IMDG

UN Number : UN3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)  
MARINE POLLUTANT  
Transport hazard class(es) : 9 Miscellaneous dangerous substances and articles  
Label 9



Packing group : III  
Marine pollutant : Yes

### 14.4 IATA

UN Number : UN3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)  
Transport hazard class(es) : 9 Miscellaneous dangerous substances and articles  
Label 9



Packing group : III

# VB 225™ FS Part A (Resin)

## Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

### 14.5. Additional information

Other information : No supplementary information available.

Special transport precautions : Do not handle until all safety precautions have been read and understood.

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

Alkyl (C12-14) glycidyl ether (68609-97-2)	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.

### 15.2. US State regulations

VB 225™ FS Part A (Resin)	
State or local regulations	This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

## SECTION 16: Other information

Date of issue : 02/25/2013

Revision date : 01/24/2024

Other information : None.

*Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.*

### SECTION 1: Identification

#### 1.1. Product identifier

Product name : VB 225™ FS Part B (Hardener)  
Product code : Not available.

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Epoxy resin hardening agent.

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

Penetron Specialty Products Inc.  
601 S. 10th Street, Unit 300  
Allentown, PA 18103 - USA  
+1 (631) 941-9700  
info@penetransp.com – www.penetronsp.com

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC: US and Canada: 1-800-424-9300; International +1 703-527-3887

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Acute toxicity - Oral 4; Dermal 4; Inhalation 3  
Skin corrosion/skin irritation 2  
Serious eye damage/eye irritation 1  
Reproductive toxicity 2

#### 2.2. Label elements

##### GHS-US labelling

Hazard pictograms (GHS-US) :



GHS05

GHS06

GHS07

GHS08

Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

Harmful if swallowed. Harmful in contact with skin. Toxic if inhaled. Causes skin irritation. Causes serious eye damage. Suspected of damaging fertility or the unborn child.

Precautionary statements (GHS-US) :

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Response: If exposed or concerned: Get medical advice/attention. Specific treatment (see supplemental first aid instructions on this label). Eyes - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. Skin - IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. Inhalation - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician. Ingestion - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Storage - Store locked up. Store in a well-ventilated place. Keep container tightly closed. Disposal - Dispose of contents/container to an approved waste disposal plant.

#### 2.3. Other hazards

Hazards Not Otherwise Classified (HNOC) : N/A

#### 2.4. Unknown acute toxicity (GHS-US)

25% unknown acute toxicity.

Other information: Harmful to aquatic life with long lasting effects. Toxic to aquatic life.

# VB 225™ FS Part B (Hardener)

## Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Not applicable.

#### 3.2. Mixture

Name	Product identifier	%
p-tert-Butyl phenol	(CAS No) 98-54-4	25 - 50
m-Xylene-.alpha., .alpha.'-diamine	(CAS No) 1477-55-0	25 - 50

\* The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

- First-aid measures after inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If breathing is difficult, (trained personnel should) give oxygen.
- First-aid measures after skin contact : In case of contact, wash off immediately with soap and plenty of water for at least 15 minutes. If symptoms persist, call a physician.
- First-aid measures after eye contact : In case of contact, rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area. Seek immediate medical attention/advice.
- First-aid measures after ingestion : If swallowed, rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.

#### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after inhalation : Harmful if inhaled. Causes severe damage to the respiratory tract. Coughing and/or wheezing.
- Symptoms/injuries after skin contact : May cause skin irritation, may cause burning sensation. Prolonged contact may cause redness and irritation.
- Symptoms/injuries after eye contact : Causes serious eye damage, severely irritating to eyes. May cause irreversible damage to the eyes. May cause burns.
- Symptoms/injuries after ingestion : May be harmful if swallowed. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. May cause nausea, vomiting and diarrhea.

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

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Dry chemical, carbon dioxide, water spray.
- Unsuitable extinguishing media : CAUTION: Use of water spray when fighting fire may be inefficient.

#### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : When heated, vapors may form explosive mixtures with air: indoors, outdoors and sewers explosion hazards. Runoff may pollute waterways. Substances may be transported in a molten form.
- Uniform Fire Code: *Irritant*: Liquid  
*Toxic*: Liquid  
*Combustible Liquid*: III-B

#### 5.3. Advice for firefighters

- Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Use special care to avoid static electric charges. Eliminate sources of ignition. Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. DO NOT GET WATER INSIDE CONTAINERS.

# VB 225™ FS Part B (Hardener)

## Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

### 6.2. Methods and material for containment and cleaning up

- For containment : Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).
- Methods for cleaning up : Scoop up material and place in a properly labelled disposal container. Clean contaminated surfaces thoroughly. Provide ventilation. Soak up with inert absorbent materials.

### 6.3. Reference to other sections

See Section 8 for further information on protective clothing and equipment and Section 13 for advice on waste disposal.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Handle in accordance with good industrial hygiene and safety practice. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes, and clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. In case of insufficient ventilation, wear suitable respiratory equipment. Do not breathe vapor or mist. Use only with adequate ventilation and in closed systems.
- Hygiene measures : Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children. Protect from moisture. Store away from other materials. Store away from sources of ignition.
- Incompatible Products : Strong acids. Strong oxidizing agents. Strong bases.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

m-Xylene- $\alpha,\alpha'$ -diamine (1477-55-0)	
ACGIH	S* Ceiling: 0.1 mg/m <sup>3</sup>
OSHA	(vacated) S* (vacated) Ceiling: 0.1 mg/m <sup>3</sup>
NIOSH	Ceiling: 0.1 mg/m <sup>3</sup>

Other exposure guidelines: Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F. 2d 962 (11th Cir., 1992)

### 8.2. Exposure controls

- Appropriate engineering controls : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.
- Hand protection : Protective gloves made of rubber or PVC.
- Eye protection : Wear approved eye protection (properly fitted dust- or splash-proof chemical safety goggles) and face protection (face shield).
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Environmental exposure controls : Maintain levels below Community environmental protection thresholds.
- Other information : Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Appearance : Clear to light yellow fluid
- Color : Yellow
- Odor : Amine
- Odor threshold : No data available
- pH : 11
- Melting point : No data available

# VB 225™ FS Part B (Hardener)

## Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

Freezing point	: No data available
Boiling point	: 392 °F (200 °C)
Flash point	: 302 °F (150°C)
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Vapor pressure	: No data available
Specific gravity	: 1.02
Relative vapor density at 20 °C	: No data available
Solubility	: Slightly soluble
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 500

### 9.2. Other information

No additional information available.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No dangerous reaction known under conditions of normal use.

### 10.2. Chemical stability

Stable under normal storage conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

### 10.4. Conditions to avoid

Sources of ignition. Heat. Incompatible materials.

### 10.5. Incompatible materials

Strong acids. Strong oxidizing agents. Strong bases.

### 10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Harmful if inhaled.

<b>p-tert-Butyl phenol (98-54-4)</b>	
LD50 oral rat	3250 µL/kg
LD50 dermal rabbit	2318 mg/kg

<b>m-Xylene-.alpha., .alpha. '-diamine (1477-55-0)</b>	
LD50 oral rat	660 mg/kg
LD50 dermal rabbit	2 g/kg
LC50 inhalation rat	700 ppm 1 hour

Skin corrosion/irritation	: Causes skin irritation. Prolonged contact may cause redness and irritation. May be absorbed through the skin in harmful amounts. Harmful in contact with skin. Erythema (skin redness).
Serious eye damage/irritation	: Causes serious eye damage. Severely irritating to eyes. May cause irreversible damage to eyes.
Respiratory or skin sensitization	: May cause irritation of respiratory tract. Toxic by inhalation.
Germ cell mutagenicity	: Based on available data, the classification criteria are not met.
Carcinogenicity	: Based on available data, the classification criteria are not met.

# VB 225™ FS Part B (Hardener)

## Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

Reproductive toxicity	: Contains a known or suspected reproductive toxin.
Specific target organ toxicity (single exposure)	: Based on available data, the classification criteria are not met.
Specific target organ toxicity (repeated exposure)	: Based on available data, the classification criteria are not met.
Aspiration hazard	: Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation	: May cause irritation of respiratory tract. Toxic by inhalation. Coughing and/or wheezing. Difficulty in breathing.
Symptoms/injuries after skin contact	: Causes skin irritation. Prolonged contact may cause redness and irritation. May be absorbed through the skin in harmful amounts. Harmful in contact with skin. Erythema (skin redness).
Symptoms/injuries after eye contact	: Causes serious eye damage. Severely irritating to eyes. May cause irreversible damage to eyes. May cause blindness; burning.
Symptoms/injuries after ingestion	: Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Toxic to aquatic organisms. Harmful to aquatic life with long lasting effects.

### 12.2. Persistence and degradability

<b>p-tert-Butyl phenol (98-54-4)</b>	
Toxicity to Algae	72h EC50 = 11.2 mg/L (Desmodesmus subspicatus)
Toxicity to Fish	96h LC50: 4.71 – 5.62 mg/L (Pimephales promelas) 96h LC50 = 6.9 mg/L (Cyprinus carpio)
Toxicity to Microorganisms	EC50 = 0.21 mg/L 5 min
Daphnia Magna (Water Flea)	48h EC50 = 3.9 mg/L 48h EC50: 3.4 – 4.5 mg/L

### 12.3. Bioaccumulative potential

<b>p-tert-Butyl phenol (98-54-4)</b>	
Bioaccumulative potential	Log Pow 2.44

### 12.4. Mobility in soil

No additional information available.

### 12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations : This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Additional information : Dispose of contents/containers in accordance with local regulations.

## SECTION 14: Transport information

### 14.1 DOT, ADR, IMDG, IATA

UN Number : UN2735  
Proper Shipping Name : AMINES, LIQUID, CORROSIVE, N.O.S.\*  
Transport Hazard Class(es) : 8  
Hazard labels :



Packing group : II  
Marine pollutant : Yes

### 14.2. Additional information

Special transport precautions : Do not handle until all safety precautions have been read and understood.

# VB 225™ FS Part B (Hardener)

## Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

### SECTION 15: Regulatory information

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#### 15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

#### 15.2. US State regulations

VB 225™ FS Part B (Hardener)	
State or local regulations	This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

### SECTION 16: Other information

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Date of issue : 02/25/2013  
Revision date : 01/24/2024  
Other information : None.

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