1. Identification

Product identifier: Earth Shield® VEN250 Part A Epoxy

Other means of identification: Bonding epoxy resin

Recommended use: Not available.

Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information

Company Name: J P Specialties, Inc.
Address: 25811 Jefferson Avenue
          Murrieta, CA 92562
          USA

After hours telephone number: 1-800-821-3559
Normal work hours telephone number: 1-800-821-3859
Website: www.jpspecialties.com
E-mail: jpspec@jpspecialties.com
Emergency 24-hour telephone number: CHEMTREC: North America 1-800-424-9300  International 1-800-527-3887

Information on operation hours: 7:00 a.m. to 3:30 p.m.

2. Hazard(s) identification

Physical hazards: Not classified.

Health hazards:
- Skin corrosion/irritation: Category 2
- Serious eye damage/eye irritation: Category 2
- Sensitization, skin: Category 1
- Carcinogenicity: Category 2

Environmental hazards: Not classified.

OSHA defined hazards: Not classified.

Label elements

Signal word: Warning

Hazard statement: Causes serious eye irritation. May cause an allergic skin reaction. Suspected of damaging the unborn child. Causes skin irritation.

Precautionary statement

Prevention: Wash thoroughly after handling. Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing must not be allowed out of the workplace. 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.

Response: IF ON SKIN: Wash with plenty of soap and water. Specific treatment see Section 4 of this SDS. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. 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 skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. IF exposed or concerned: Get medical advice/attention.

Storage: Store locked up.

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations.
3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Mixtures</th>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BISPHENOL A-(EPICHLORHYDRIN)</td>
<td>EPOXY RESIN</td>
<td>25068-38-6</td>
<td>55 - 65</td>
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<tr>
<td></td>
<td>TALC (Mg3Si4O10(OH)2)</td>
<td></td>
<td>14807-96-6</td>
<td>15 - 25</td>
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<tr>
<td></td>
<td>1-METHOXYPROPAN-2-OL</td>
<td></td>
<td>107-98-2</td>
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<tr>
<td></td>
<td>BENZENE,1-METHYLETHYL-</td>
<td></td>
<td>98-82-8</td>
<td>&lt;1</td>
</tr>
<tr>
<td></td>
<td>SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM.</td>
<td></td>
<td>64742-95-6</td>
<td>&lt;1</td>
</tr>
</tbody>
</table>

4. First-aid measures

**Inhalation**
If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical attention, if needed.

**Skin contact**
Remove contaminated clothing immediately and wash skin with soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. For minor skin contact, avoid spreading material on unaffected skin. Take off contaminated clothing and wash before reuse.

**Eye contact**
Immediately flush eyes with plenty of water for at least 15 minutes. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Continue rinsing. Get medical attention immediately.

**Ingestion**
Call a physician or poison control center immediately. Rinse mouth thoroughly. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

**Most important symptoms/effects, acute and delayed**
Skin irritation. May cause an allergic skin reaction. Dermatitis. Rash. Irritant effects. May cause redness and pain. Prolonged exposure may cause chronic effects.

**Indication of immediate medical attention and special treatment needed**
Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

**General information**
Take off contaminated clothing and shoes immediately. In case of shortness of breath, give oxygen. IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

5. Fire-fighting measures

**Suitable extinguishing media**

**Unsuitable extinguishing media**
Water. Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical**
Fire may produce irritating, corrosive and/or toxic gases.

**Special protective equipment and precautions for firefighters**
Wear suitable protective equipment. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

**Fire fighting equipment/instructions**
Move containers from fire area if you can do so without risk. In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers. Cool containers exposed to flames with water until well after the fire is out. Water runoff can cause environmental damage.

**Specific methods**
In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers.

**General fire hazards**
No unusual fire or explosion hazards noted.
6. Accidental release measures

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

Immediately evacuate personnel to safe areas. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Avoid skin contact and inhalation of vapors during disposal of spills. Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up**

Extinguish all flames in the vicinity.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

**Precautions for safe handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not breathe mist or vapor. Do not get this material in contact with eyes. Do not taste or swallow. Avoid contact with skin. Avoid prolonged exposure. Avoid contact with clothing. Do not use in areas without adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash thoroughly after handling. Avoid release to the environment. Do not empty into drains.

**Conditions for safe storage, including any incompatibilities**

CAUTION Store locked up. Keep away from heat, sparks and open flame. Store in a closed container away from incompatible materials. Store in a well-ventilated place. Keep away from food, drink and animal feedingstuffs. Keep out of the reach of children. Store in accordance with local/regional/national/international regulation.

8. Exposure controls/personal protection

**Occupational exposure limits**

This mixture has no ingredients that have PEL, TLV, or other recommended exposure limit

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls**

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

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

**Eye/face protection**

Safety glasses. If risk of splashing, wear safety goggles or face shield.

**Skin protection**

**Hand protection**

Chemical resistant gloves are recommended. If contact with forearms is likely wear gauntlet style gloves.

**Other**

Wear appropriate clothing to prevent any possibility of skin contact.

**Respiratory protection**

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

**Appearance**

**Physical state**

Liquid.

**Form**

Liquid.

**Color**

Not available.
Odor threshold
Not available.

pH
7 estimated

Melting point/freezing point
Not available.

Initial boiling point and boiling range
> 392 °F (> 200 °C)

Flash point
> 302.0 °F (> 150.0 °C)

Evaporation rate
Not available.

Flammability (solid, gas)
Not available.

Upper/lower flammability or explosive limits

- Flammability limit - lower (%)
  Not available.
- Flammability limit - upper (%)
  Not available.
- Explosive limit - lower (%)
  Not available.
- Explosive limit - upper (%)
  Not available.

Vapor pressure
Not available.

Vapor density
Not available.

Relative density
Not available.

Solubility(ies)

Solubility (water)
Not available.

Partition coefficient (n-octanol/water)
> 3

Auto-ignition temperature
572 °F (300 °C)

Decomposition temperature
Not available.

Viscosity
Not available.

Other information
Specific gravity
1.48

10. Stability and reactivity

Reactivity
The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability
Stable.

Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use.

Conditions to avoid
Heat, flames and sparks. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

Incompatible materials
Peroxides. Chlorine. Strong acids, alkalies and oxidizing agents.

Hazardous decomposition products
If product is burned hazardous gases such as oxides of carbon and nitrogen and various hydrocarbons may be produced.

11. Toxicological information

Information on likely routes of exposure

- Inhalation
  May be harmful if inhaled.
- Skin contact
  Causes skin irritation.
- Eye contact
  Causes serious eye irritation.
- Ingestion
  May be harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics
Not available.

Information on toxicological effects

Acute toxicity
Not available.
Causes skin irritation.

Serious eye damage/eye irritation

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization Causes skin irritation. May cause allergic skin disorders in sensitive individuals.

Germ cell mutagenicity Not available.

Carcinogenicity Suspected of causing cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity Not listed.


US. National Toxicology Program (NTP) Report on Carcinogens Not listed.

Reproductive toxicity Not available.

Specific target organ toxicity - single exposure Not available.

Specific target organ toxicity - repeated exposure Not available.

Aspiration hazard Not available.

12. Ecological information

Ecotoxicity

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEN250 Part A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Daphnia 4.2291 mg/l, 48 hours estimated</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Fish 2.3496 mg/l, 96 hours estimated</td>
</tr>
</tbody>
</table>

Persistence and degradability Not available.

Bioaccumulative potential Not available.

Partition coefficient n-octanol / water (log Kow) SN1730 Part A > 3

Mobility in soil Not available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Dispose in accordance with all applicable regulations. When this product as supplied is to be discarded as waste, it does not meet the definition of a RCRA waste under 40 CFR 261.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Offer rinsed packaging material to local recycling facilities.

14. Transport information

DOT

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN proper shipping name</th>
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<tbody>
<tr>
<td>UN3082</td>
<td>Environmentally hazardous substances, liquid, n.o.s. (BISPHENOL A-(EPICHLORHYDRIN) EPOXY RESIN)</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td></td>
</tr>
<tr>
<td>----------------------------</td>
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</tr>
<tr>
<td>Class</td>
<td>9</td>
</tr>
<tr>
<td>Subsidiary risk</td>
<td>-</td>
</tr>
<tr>
<td>Label(s)</td>
<td>9</td>
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<tr>
<td>Packing group</td>
<td>III</td>
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<tr>
<td>Special precautions for user</td>
<td>Not available.</td>
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<tr>
<td>Special provisions</td>
<td>8, 146, 335, IB3, T4, TP1, TP29</td>
</tr>
<tr>
<td>Packaging exceptions</td>
<td>155</td>
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<tr>
<td>Packaging non bulk</td>
<td>203</td>
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<td>Packaging bulk</td>
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</tbody>
</table>

**IATA**

UN number: UN3082  
UN proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (BISPHENOL A-(EPICHLORHYDRIN) EPOXY RESIN)

**IMDG**

UN number: UN3082  
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BISPHENOL A-(EPICHLORHYDRIN) EPOXY RESIN)

**15. Regulatory information**

US federal regulations  
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)  
Not regulated.
CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)
Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
SARA 302 Extremely hazardous substance
Not listed.

Classified hazard categories
Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitization

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)
Not regulated.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
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<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>No</td>
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<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
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<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>No</td>
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<tr>
<td>Taiwan</td>
<td>Taiwan Chemical Substance Inventory (TCSI)</td>
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<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date: 07-11-2018
Version #: 01
NFPA ratings: Health: 2
Flammability: 0
Instability: 0

Disclaimer: Not available.
1. Identification

Product identifier: Earth Shield® VEN250 Part B Hardener

Other means of identification: Bonding Epoxy Hardener

Recommended use: Not available.

Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information

Company Name: J P Specialties, Inc.
Address: 25811 Jefferson Ave
Murrieta, CA 92562
USA

After hours telephone number: 1-800-821-3859

Normal work hours telephone number: 1-800-821-3859

Website: www.jpspecialties.com
E-mail: jpspec@jpspecialties.com

Emergency 24-hour telephone number: CHEMTREC: North America 1-800-424-9300  International 1-800-527-38877

Information on operation hours: 7:00 a.m. to 3:30 p.m.

2. Hazard(s) identification

Physical hazards: Not classified.

Health hazards:
- Skin corrosion/irritation: Category 1
- Serious eye damage/eye irritation: Category 1
- Sensitization, respiratory: Category 1
- Sensitization, skin: Category 1
- Reproductive toxicity: Category 2
- Specific target organ toxicity, single exposure: Category 1
- Specific target organ toxicity, repeated exposure: Category 1

Environmental hazards: Not classified.

OSHA defined hazards: Not classified.

Label elements

Signal word: Danger

Hazard statement: Causes severe skin burns and eye damage. Causes serious eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Suspected of damaging fertility or the unborn child. Causes damage to organs ( ). Causes damage to organs through prolonged or repeated exposure.

Precautionary statement

Prevention: Do not breathe dust or mist. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. In case of inadequate ventilation wear respiratory protection. Contaminated work clothing must not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not eat, drink or smoke when using this product.
Response

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Immediately call a poison center/doctor. Specific treatment see Section 4 of this SDS. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Specific treatment see Section 4 of this SDS. Wash contaminated clothing before reuse. IF exposed or concerned: Get medical advice/attention. Get medical advice/attention if you feel unwell.

Storage

Store locked up.

Disposal

Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC)

None known.

Supplemental information

None.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRADE SECRET*</td>
<td>Proprietary*</td>
<td>20 - 30</td>
<td></td>
</tr>
<tr>
<td>Polyamidoamine</td>
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<td>5 - 10</td>
<td></td>
</tr>
<tr>
<td>QUARTZ</td>
<td>14808-60-7</td>
<td>5 - 10</td>
<td></td>
</tr>
<tr>
<td>2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL</td>
<td>90-72-2</td>
<td>1 - 10</td>
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<tr>
<td>3-AMINOPROPYLTRIETHOXYSILANE</td>
<td>919-30-2</td>
<td>&lt;1</td>
<td></td>
</tr>
</tbody>
</table>

4. First-aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Move to fresh air. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately. Get medical attention, if needed. If symptoms persist, get medical attention.

Skin contact

Take off immediately all contaminated clothing. Remove and isolate contaminated clothing and shoes. Immediately flush skin with plenty of water. Wash off with soap and plenty of water. For minor skin contact, avoid spreading material on unaffected skin. Wash clothing separately before reuse. Call a physician or poison control center immediately. Get medical attention if irritation develops or persists.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Rinse cautiously with water for several minutes. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately. Call a physician or poison control center immediately.

Ingestion

If swallowed, rinse mouth with water (only if the person is conscious). Rinse mouth. Rinse mouth thoroughly. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Call a physician or poison control center immediately.

Most important symptoms/effects, acute and delayed

Not available.

Indication of immediate medical attention and special treatment needed

In case of shortness of breath, give oxygen. Oxygen, if needed. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
5. Fire-fighting measures


Unsuitable extinguishing media: Not available.

Specific hazards arising from the chemical: Fire may produce irritating, corrosive and/or toxic gases.

Special protective equipment and precautions for firefighters: Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

Fire fighting equipment/instructions: In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers. Cool containers exposed to flames with water until well after the fire is out. Water runoff can cause environmental damage.

Specific methods: In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:

- Immediately evacuate personnel to safe areas. Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Keep upwind. Keep out of low areas. Keep people away from and upwind of spill/leak. Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Wear appropriate protective equipment and clothing during clean-up. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Methods and materials for containment and cleaning up:

- Extinguish all flames in the vicinity.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Collect spillage. Following product recovery, flush area with water. Prevent product from entering drains. Do not allow material to contaminate ground water system.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills in original containers for re-use. Absorb spill with vermiculite or other inert material.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not contaminate water.

7. Handling and storage

Precautions for safe handling:

- Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and accumulation. Do not breathe dust/fume/gas/mist/vapors/spray. Do not breathe dust or mist. Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not taste or swallow. Avoid contact with skin. Avoid contact with eyes. Avoid contact during pregnancy/while nursing. Do not get this material on clothing. Use personal protective equipment as required. Use only outdoors or in a well-ventilated area. Do not use in areas without adequate ventilation. Avoid prolonged exposure. When using, do not eat, drink or smoke. When using do not eat or drink. Wash hands thoroughly after handling. Wash thoroughly after handling. Avoid release to the environment. Do not empty into drains. Handle and open container with care.

Conditions for safe storage, including any incompatibilities:


8. Exposure controls/personal protection

Occupational exposure limits: This mixture has no ingredients that have PEL, TLV, or other recommended exposure limit.

Biological limit values: No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls: Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

Individual protection measures, such as personal protective equipment:

Eye/face protection: Do not get in eyes. Avoid contact with eyes. Wear eye/face protection. Chemical goggles are recommended. Face-shield. Wear chemical protective equipment that is specifically recommended by the manufacturer.
Skin protection
Hand protection
  Wear protective gloves. Chemical resistant gloves.
Other
  Do not get this material in contact with skin. Do not get this material on clothing. Avoid contact with the skin. Wear chemical protective equipment that is specifically recommended by the manufacturer. Wear appropriate chemical resistant clothing. It may provide little or no thermal protection. Structural firefighters protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations. Chemical resistant gloves.

Respiratory protection
  Do not breathe dust/fume/gas/mist/vapors/spray. If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards
General hygiene considerations
  Do not get in eyes. Do not get this material in contact with skin. Do not get this material on clothing. When using, do not eat, drink or smoke. Avoid contact with eyes. Avoid contact with skin. Wash hands before breaks and immediately after handling the product. Keep away from food and drink. Contaminated work clothing should not be allowed out of the workplace. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties
Appearance
  Liquid.
Physical state
  Liquid.
Form
  Liquid.
Color
  Light Amber to Golden
Odor
  Ammoniacal. Amine-like.
Odor threshold
  Not available.
pH
  Alkaline
Melting point/freezing point
  Not available.
Initial boiling point and boiling range
  Not available.
Flash point
  200.0 °F (93.3 °C)
Evaporation rate
  Not available.
Flammability (solid, gas)
  Not available.
Upper/lower flammability or explosive limits
  Flammability limit - lower (%)
    Not available.
  Flammability limit - upper (%)
    Not available.
  Explosive limit - lower (%)
    Not available.
  Explosive limit - upper (%)
    Not available.
Vapor pressure
  Not available.
Vapor density
  Not available.
Relative density
  Not available.
Solubility(ies)
  Solubility (water)
    Partial
Partition coefficient (n-octanol/water)
  Not available.
Auto-ignition temperature
  Not available.
Decomposition temperature
  Not available.
Viscosity
  Not available.
Other information
  Specific gravity
    1.48
10. Stability and reactivity

**Reactivity**
Not Reactive

**Chemical stability**
Stable at normal conditions.

**Possibility of hazardous reactions**
Hazardous polymerization can occur with elevated temperatures.

**Conditions to avoid**
Not available.

**Incompatible materials**

**Hazardous decomposition products**
Toxic gas. If product is burned hazardous gases such as oxides of carbon and nitrogen and various hydrocarbons may be produced. Upon combustion, oxides of chlorine may be released.

11. Toxicological information

**Information on likely routes of exposure**

- **Inhalation**
  Irritating to respiratory system.

- **Skin contact**
  May cause an allergic skin reaction.

- **Eye contact**
  Causes serious eye damage.

- **Ingestion**
  May be harmful if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics**
Not available.

- **Information on toxicological effects**

  - **Acute toxicity**
    Not classified.

  - **Skin corrosion/irritation**
    Causes severe skin burns and eye damage.

  - **Serious eye damage/eye irritation**
    Causes serious eye damage.

- **Respiratory or skin sensitization**

  - **Respiratory sensitization**
    May cause allergy or asthma symptoms or breathing difficulties if inhaled.

  - **Skin sensitization**
    May cause sensitization by skin contact.

  - **Germ cell mutagenicity**
    Not available.

- **Carcinogenicity**
  This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. This product contains crystalline silica. Silica is a known carcinogen; however in this encapsulated form the normal routes of exposure are unavailable.

  - **IARC Monographs. Overall Evaluation of Carcinogenicity**
    Not listed.

    Not regulated.

  - **US. National Toxicology Program (NTP) Report on Carcinogens**
    Not listed.

  - **Reproductive toxicity**
    Suspected of damaging fertility or the unborn child.

  - **Specific target organ toxicity**
    Eyes.

  - **Specific target organ toxicity - single exposure**
    Skin. Respiratory system. Lungs.

  - **Specific target organ toxicity - repeated exposure**
  Not available.

  - **Aspiration hazard**
    Not available.

  - **Chronic effects**
    Prolonged inhalation may be harmful.

  - **Further information**
    Symptoms may be delayed.

12. Ecological information

**Ecotoxicity**
Components of this product are hazardous to aquatic life. Accumulation in aquatic organisms is expected. Contains a substance which causes risk of hazardous effects to the environment.

**Persistence and degradability**
Not available.

**Bioaccumulative potential**
Not available.

**Mobility in soil**
Not available.

**Other adverse effects**
Not available.
13. Disposal considerations

Disposal considerations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal. Do not dispose of waste into sewer. When this product as supplied is to be discarded as waste, it does not meet the definition of a RCRA waste under 40 CFR 261.

Waste from residues / unused products
Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging
Offer rinsed packaging material to local recycling facilities.

14. Transport information

DOT
Not regulated as dangerous goods.

IATA
Not regulated as dangerous goods.

IMDG
Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not available.

15. Regulatory information

US federal regulations
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200.
CERCLA/SARA Hazardous Substances - Not applicable.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)
Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
SARA 302 Extremely hazardous substance
Not listed.

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations
This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Material name: VEN500 Part B

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<tr>
<th>Country(s) or region</th>
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<th>On inventory (yes/no)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
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<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
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<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
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<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
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<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>No</td>
</tr>
<tr>
<td>Taiwan</td>
<td>Taiwan Chemical Substance Inventory (TCSI)</td>
<td>No</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date: 07-11-2018
Version #: 01
Further information: HMIS® is a registered trade and service mark of the NPCA.
NFPA ratings:
- Health: 3
- Flammability: 1
- Instability: 0

References:
- ACGIH
- EPA: AQUIRE database
- NLM: Hazardous Substances Data Base
- US. IARC Monographs on Occupational Exposures to Chemical Agents
- IARC Monographs. Overall Evaluation of Carcinogenicity
- National Toxicology Program (NTP) Report on Carcinogens
- ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices
- Japan Society for Occupational Health, Recommendation of Occupational Exposure Limits

Disclaimer: The information provided in this Safety Data Sheet is correct to the best of our knowledge 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.