Safety Data Sheet

Section 1. Identification

GHS product identifier :Earth Shield® VEN 500 Epoxy Part A

Other means of identification Bonding Epoxy Resin

Relevant identified uses of the substance or mixture and uses advised against

Not available

Supplier's details : J P Specialties, Inc.
25811 Jefferson Avenue
Murrieta, CA 92562
Tel.: 1-800-821-3859
Fax: 1-951-763-7074
Website URL: www.jpspecialties.com

Emergency telephone number (with hours of operation) : 1-951-763-7077
(7am to 3:30pm EST)

Section 2. Hazards Identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2B
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	

GHS label elements

Signal word Warning

Hazard statements Causes eye irritation. Causes skin irritation

Prevention Response : Wear protective gloves. Wear eye/face protection. Wash thoroughly after handling

: Specific treatment see Section 4 of this SDS. Wash contaminated clothing before reuse. If exposed or concerned: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage : Store in accordance with local/regional/national regulations.

Disposal : Dispose of contents in accordance with local/regional/national/ international regulations.

Hazards not otherwise classified : None known

Supplemental information : Not applicable

Section 3. Composition/information on ingredients

Substance/mixture : Earth Shield® VEN500 Part A

Other means of identification Bonding Epoxy Resin

CAS number/other identifiers

Product code : VEN500

Ingredient name	CAS number	%
B1SP HENOL A-(EPIC HLORHYDRIN	25068-38-6	35 - 65
2,3-EPOXYPROPYL NEODECANOATE	26761-45-5	2 - 12
PHENOL-FORMALDEHYDE POLYMER GLYCIDYL ETHER	28064-14-4	1 - 6
CARBON BLACK	1333-86-4	0 - 1
Other components below reportable levels		50.51

Any concentration shown as a range is to protect confidentiality or is due to batch variation.
There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact Rinse with water. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing.

Inhalation : Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact : Wash off with soap and water. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.

Ingestion : Rinse mouth. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Call a POISON CENTER or doctor/physician if you feel unwell.

Most important symptoms/effects, acute and delayed

: Direct contact with eye may cause temporary irritation.

Indication of immediate medical attention and special treatment needed : Treat symptomatically.

General information : Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

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Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media	:	Water fog. Foam. Dry chemical. Carbon Dioxide (CO2)
Unsuitable extinguishing media	:	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	:	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters.	:	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/ instructions	:	Move containers from the area if you can do so without risk.
Specific methods	:	Use standard firefighting procedures and consider the hazards of other involved materials.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: No action shall be taken involving any personal risk or without suitable training. Put on appropriate personal protective equipment.
For emergency responders	: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel."
Environmental precautions	: Avoid discharge into drains, water courses or onto the ground.

Methods and materials for contaminant and cleaning up

Spill	: Keep unnecessary personnel away. For personal protection, see Section 8 of the SDS This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways 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. Absorb in vermiculite, dry sand or earth and place into containers. 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. For waste disposal, see Section 13 of the SDS.

Section 7. Handling and Storage

Precautions for safe handling

Protective Measures	: Avoid prolonged exposure. Wear appropriate personal protective equipment (See Section 8).
Advice on general occupational hygiene	: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and faces before eating, drinking and smoking. See also Section 8 for additional information on hygiene measure.
Conditions for safe storage, including any incompatibilities	: Store in original tightly closed container. Store away from incompatible materials (See Section 10).

Section 8. Exposure Controls / Personal Protection

Occupational exposure limits

	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)		
Components	Type	Value	Form
CARBON BLACK (CAS 1333-86-4)	PEL	3.5 mg/m3	
	US.ACGIH Limit Values		
CARBON BLACK (CAS 1333-86-4)	TWA	3 mg/m3	Inhalable fraction
	US. NIOSH: Pocket guide to Chemical Hazards		
CARBON BLACK (CAS 1333-86-4)	TWA	0.1 mg/m3	

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 defined occupational exposure limit is not exceeded.
Individual protection measures such as personal protective equipment	
Eye/ face protection	Wear safety glasses; chemical goggles (if splashing is possible).
Hand Protection	Chemical resistant gloves are recommended. If contact with forearms is likely wear gauntlet style gloves.
Other	Wear suitable protective clothing.
	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	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.

Safety Data Sheet

Section 9. Physical and Chemical Properties

Appearance

Physical state	: Liquid
Form	: Liquid
Color	: Not Available
Odor	: Not available
Odor Threshold	: Not available
pH	: Not available
Melting point . freezing point	: Not available
Initial boiling point and boiling range	: 212°F (100°C) estimated
Flash point	: 482.0°F (250.0°) estimated
Evaporation rate	: Not available
Flammability (solid, gas)	: Not available
Lower and upper explosive (flammable) limits	
Flammability limit-lower (%)	: Not available
Flammability limit-upper (%)	: Not available
Explosive limit-lower (%)	: Not available
Explosive limit-upper(%)	: Not available
Vapor pressure	: 0.01 hPa estimated
Vapor density	: Not available
Relative density	: Not available
Solubility in water	: Not available
Partition coefficient n-octanol/water	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
Viscosity	: Not available
Other information	
Flammability class	Combustible 111B estimated

Section 10. Stability and Reactivity

Reactivity	: The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	: Material is stable under normal conditions.
Possibility of hazardous reactions	: Hazardous polymerization does not occur
Conditions to avoid	: Avoid temperatures exceeding the flash point. Contact with incompatible materials
Incompatible materials	: Strong oxidizing agents
Hazardous decomposition products	: No hazardous decomposition products are known.

Section 11. Toxicological Information

Information of likely routes of exposure

Ingestion	: Expected to be a low ingestion hazard.
Inhalation	: Prolonged inhalation may be harmful.
Skin contact	: Causes skin irritation.
Eye contact	; Causes eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	: Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity	: Not available.
Skin corrosion / irritation	: Prolonged skin contact may cause temporary irritation.
Serious eye damage / eye irritation	: Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization	: Not available.
Skin sensitization	: This product is not expected to cause skin sensitization.

Section 11. Toxicological Information

Germ cell mutagenicity : No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

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

Carbon Black (CAS 1333-86-4)	2B Possibly carcinogenic to humans.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity : This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure : Not Classified.

Specific target organ toxicity - repeated exposure : Not Classified.

Aspiration hazard : Not available.

Chronic effects : Prolonged inhalation may be harmful.

Section 12. Ecological Information

Ecotoxicity : This product contains a substance which is toxic to aquatic organisms.

VEN 500 Part A (CAS Mixture)

Product		Species	Test results
Crustacea	EC50	Daphnia	6.6372 mg/l, 48 hour estimated
Fish	LC50	Fish	3.6873 mg/l, 96 hour estimated

BISP HENOL A-(EPIC HLORHYDRIN) EPOXY RESIN (CAS 25068-38-6)

Components		Species	Test results
Crustacea	EC50	Daphnia magna	2.7 mg/l, 48 hour
Fish	LC50	Salma gairdneri (new name Oncorhynchus mykiss)	1.5 mg/l, 96 hour

PHENOL-FORMALDEHYDE POLYMER GLYCIDYL ETHER (CAS 28064-14-4)

Components		Species	Test results
Acute Fish	LC50	Fish	1 - 10 mg/l

* Estimates for product may be based on additional component data not shown.

Section 13. Disposal Considerations

Disposal Instructions : 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 contain product residue, follow label warnings even after container is emptied.

Section 14. Transport Information

DOT Classification	IMDG	IATA
Not regulated as dangerous goods	Not regulated as dangerous goods	Not regulated as dangerous goods

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

Section 15. Regulatory Information

U.S. Federal regulations : All components are on the U.S. EPA TSCA Inventory List.

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

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

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) : Not listed

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard Categories

Immediate Hazard - Yes

Delayed Hazard - No

Fire Hazard - No

Pressure Hazard - No

Reactivity Hazard - No

SARA 302 Extremely hazardous substance Not Listed

SARA 311/312 Hazardous Chemicals Yes

SARA 313 (TRI reporting)
Not regulated. **Not regulated**

Section 15. Regulatory Information

Other Federal Regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112 ® Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Not regulated.

US State Regulations

US. Massachusetts RTK - Substance List

Carbon Black (CAS 1333-86-4)

US. New Jersey Worker and Community Right-to-know Act

Not regulated

US. Pennsylvania RTK - Hazardous Substances

Carbon Black (CAS 1333-86-4)

US. Rhode Island RTK

Not regulated

US- California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

US- California Proposition 65 - CRT: Listed date / Carcinogenic substances

Carbon Black (CAS 1333-86-4) Listed: February 21, 2003

Section 15. Regulatory Information

International Inventories

Country(s) or region	Inventory Name	On Inventory (Yes/No)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemical List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

* - 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 this product are not listed or exempt from listing on the inventory administered by the governing country(s).

Section 16. Other Information

History

Date of issue mm/dd/yyyy : 11/10/2015

Version : 1

Revised sections : Not applicable

Prepared by J P Specialties, Inc.

Key to abbreviations

ACGIH - American Conference of Governmental Industrial Hygienists
AICS - Australian Inventory of Chemical Substances
CERCLA - Comprehensive Environmental Response Compensation and Liability Act
CWA - Clean Water Act
DOT - Department of Transportation
DSL - Canada (Domestic Substances List)
ECL - Korea (Existing Chemicals List)
ENCS - Japan (Inventory of Chemicals and Chemical Substances)
ELINCS - European List of Notified Chemical Substances
GHS - Globally Harmonized System
HCS - Hazardous Communication Standard
IATA - International Air Transport Association
IARC - International Agency of Research on Cancer
IBC - Intermediate Bulk Container
IMDG - International Maritime Dangerous Goods
LogPow - logarithm of the octanol/water partition coefficient
NDSL - Canada (Non-Domestic Substances List)
NIOSH - National Institute of Occupational Safety and Health
NTP - National Toxicology Program
OEL - Over Exposure Limit
OSHA - Occupational Safety & Health Administration
PICCS - Philippine Inventory of Chemicals and Chemical Substances
PEL - Permissable Exposure Limit
RCRA - Resource Conservation Recovery Act
RTK - Right To Know
SARA - Superfund Amendments & Reauthorization Act
TSCA - Toxic Substances Control Agency
TWA - Time Weighted Average
UN - United Nations

Notice to reader

To the best of our knowledge, the information contained herein is believed to be accurate at the time of preparation and obtained from sources believed to be reliable. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

The information and recommendations contained herein are not intended to relieve the reader of responsibility to investigate and understand the laws, procedures, and regulations applicable to the readers enterprise, not to relieve the reader of responsibility to comply with laws applicable to the readers enterprise and place of business and to verify independently the information provided in this document as it may relate to the readers specific process or application.

Section 1. Identification

GHS product identifier :Earth Shield® VEN 500 Epoxy Part B

Other means of identification Bonding Epoxy Hardener

Relevant identified uses of the substance or mixture and uses advised against

Not available

Supplier's details : J P Specialties, Inc.
25811 Jefferson Avenue
Murrieta, CA 92562
Tel.: 1-800-821-3859
Fax: 1-951-763-7074
Website URL: www.jpspecialties.com

Emergency telephone number (with hours of operation) : 1-951-763-7077
(7am to 3:30pm EST)

Section 2. Hazards Identification

Physical hazards	Not classified.	Category 2
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation sensitization, respiratory sensitization skin	Category 1
	Specific target organ toxicity, single exposure	Category 1
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	

GHS label elements

Signal word Warning

Section 2. Hazards Identification

Hazard Statement Causes eye irritation. Causes skin irritation. May cause an allergic skin reaction.

Prevention : Wear protective gloves. Wear eye/face protection. Wash thoroughly after handling

Response : Specific treatment see Section 4 of this SDS. Wash contaminated clothing before reuse. If exposed or concerned: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage : Store in accordance with local/regional/national regulations.

Disposal : Dispose of contents in accordance with local/regional/national/ international regulations.

Hazards not otherwise classified : None known

Supplemental information : Not applicable

Section 3. Composition/information on ingredients

Substance/mixture : Earth Shield® VEN500 Part B

Other means of identification Bonding Epoxy Hardener

CAS number/other identifiers

Product code : VEN500

Ingredient name	CAS number	%
BENZYL ALCOHOL	100-51-6	x
TRIET HYENETETRAMINE	112-24-3	1 - 6
3-AMINOPROPYLTRIET HOXYSILANE	919-3—2	0 - 3
EI HYLENEDIAMINE	107-15-3	0 - 1
Other components below reportable levels		59.84

Any concentration shown as a range is to protect confidentiality or is due to batch variation.
There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact Rinse with water. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing.

Inhalation : Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact : Wash off with soap and water. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.

Ingestion : Rinse mouth. Do not induce vomiting. 1f vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Call a POISON CENTER or doctor/physician if you feel unwell.

Most important symptoms/effects, acute and delayed

: Direct contact with eye may cause temporary irritation.

Indication of immediate medical attention and special treatment needed : Treat symptomatically.

General information : Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media : Water fog. Foam. Dry chemical. Carbon Dioxide (CO2)

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

Specific hazards arising from the chemical : During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters. : Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Section 5. Firefighting measures

Fire-fighting equipment/ instructions : Move containers from the area if you can do so without risk.

Specific methods : Use standard firefighting procedures and consider the hazards of other involved materials.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel."

Environmental precautions : Avoid discharge into drains, water courses or onto the ground.

Methods and materials for contaminant and cleaning up

Spill : Keep unnecessary personnel away. For personal protection, see Section 8 of the SDS

This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways

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. Absorb in vermiculite, dry sand or earth and place into containers. 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. For waste disposal, see section 13 of the SDS

Section 7. Handling and storage

Precautions for safe handling	:	Avoid prolonged exposure. Observe good industrial hygiene practices. Wear appropriate personal protection equipment (See Section 8).
Protective measures	:	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	:	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and faces before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	:	Store in original tightly closed container. Store away from incompatible materials (see Section 10).

Section 8. Exposure Controls /Protection Protection

Occupational exposure limits

	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)		
Components	Type	Value	Form
ET HYLENEDIAMINE (CAS 107-15-3)	PEL	25 mg/m3	
	US.ACGIH Limit Values		
ET HYLENEDIAMIONE (CAS 107-15-3)	TWA	10 mg/m3	Inhalable fraction
	US. NIOSH: Pocket guide to Chemical Hazards		
ET HYLENEDIAMIONE (CAS 107-15-3)	TWA	25 mg/m3	
	US. IAHA Workplace Environmental Exposure Level (WEEL Guides		
BENZYL ALCOHOL (CAS 100-51-6)	TWA	44.2 mg/m3	
TRIET HYLENETERAMINE (CAS 112-24-3)	TWA	10 ppm 6 mg/m3	

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 defined occupational exposure limit is not exceeded.
Individual protection measures such as personal protective equipment	
Eye/ face protection	Wear safety glasses; chemical goggles (if splashing is possible).
Hand Protection	Chemical resistant gloves are recommended. If contact with forearms is likely wear gauntlet style gloves.
Other	Wear suitable protective clothing.
Respiratory protection	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	Wear appropriate thermal protective clothing, when necessary.

Section 8. Exposure Controls /Protection Protection

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.

EXPOSURE GUIDELINES

US ACGIH THRESHOLDLIMIT VALUES: SKIN DESIGNATION

ET HYLENEDIAMINE (CAS 107-15-3) Can be absorbed through the skin

US WEEL Guides: SKIN DESIGNATION

TRIET HYLENETETRAMINE (CAS 112-24-3) Can be absorbed through the skin

Section 9. Physical and Chemical Properties

Appearance

Physical state	: Liquid
Form	: Liquid
Color	: Gold to light amber
Odor	: Amoniacle, Amine like.
Odor Threshold	: Not available
pH	: Alkaline
Melting point . freezing point	: 4.64°F (-15.2°C) estimated
Initial boiling point and boiling range	: 401.54°F (205.3°C) estimated
Flash point	: >199.4°F (>93.0°C) estimated
Evaporation rate	: Not available
Flammability (solid, gas)	: Not available
Lower and upper explosive (flammable) limits	
Flammability limit-lower (%)	: 3% estimated
Flammability limit-upper (%)	: 10% estimated
Explosive limit-lower (%)	: Not available
Explosive limit-upper(%)	: Not available
Vapor pressure	: Not available
Vapor density	: Not available
Relative density	: Not available
Solubility in water	: Partial
Partition coefficient n-octanol/ water	: Not available
Auto-ignition temperature	: 640°F (337.78°C) estimated
Decomposition temperature	: Not available
Viscosity	: Not available
Other information	
Specific Gravity	0.95

Section 10. Stability and Reactivity

Reactivity	: The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	: Material is stable under normal conditions.
Possibility of hazardous reactions	: Hazardous polymerization does not occur
Conditions to avoid	: Avoid temperatures exceeding the flash point. Contact with incompatible materials
Incompatible Materials	: Strong oxidizing agents.
Hazardous decomposition products	: No hazardous decomposition products are known.

Section 11. Toxicological Information

Information of likely routes of exposure

Ingestion	: Expected to be a low ingestion hazard.
Inhalation	: Prolonged inhalation may be harmful.
Skin contact	: Causes skin irritation.
Eye contact	; Causes eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	: Direct contact with eyes may cause temporary irritation.
Skin corrosion / irritation	: Prolonged skin contact may cause temporary irritation.
Serious eye damage / eye irritation	: Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization	: Not available.
Skin sensitization	: May cause skin sensitization by contact.
Germ cell mutagenicity	: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Section 11. Toxicological Information

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.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity : This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure : Not Classified.

Specific target organ toxicity - repeated exposure : Not Classified.

Aspiration hazard : Not available.

Chronic effects : Prolonged inhalation may be harmful.

Information on acute toxicity		
VEN500 Part B		
Product	Species	Test Results
Acute Dermal LD50	Rabbit	5757.0889 mg/kg estimated
Inhalation LC50	Rat	2942.2148 mg/l, 8 hours estimated
Oral LD50	Mouse Rabbit Rat	4648.6997 mg/kg estimated 5707.897 mg/kg estimated 3548.4497 mg/kg estimated
Other LD50	Mouse Rat	2691.874 mg.kg estimated 894.0341 mg/kg estimated

Section 11. Toxicological Information

BENZYL ALCOHOL (CAS 100-51-6)		
VEN500 Part B		
Components	Species	Test Results
Acute Dermal LD50	Rabbit	2000 mg/kg estimated
Inhalation LC50	Rat	1000 mg/l, 8 hours estimated
Oral LD50	Mouse Rabbit Rat	Hours 1580 mg/kg estimated 1940 mg/kg estimated 1230 - 3100 mg/kg estimated
Other LD50	Mouse Rat	950 mg/kg 314 mg/kg

ETHYLENEDIAMINE (CAS 107-15-3)		
VEN500 Part B		
Components	Species	Test Results
Acute Dermal LD50	Rabbit Rat	730 mg/kg estimated
Other LD50	Mouse Rat	200 mg/kg 76 mg/kg
*Estimates for product may be based on additional component data not shown.		

Section 12. Ecological Information

Ecotoxicity : This product contains a substance which is toxic to aquatic organisms.

VEN500 part B (CAS Mixture)

Product		Species	Test results
Fish	LC50	Fish	474.428 mg/l, 96 hour estimated

BENZYL ALCOHOL (CAS 100-51-6)

Components		Species	Test results
Crustacea	EC50	Daphnia magna	2.7 mg/l, 48 hour
Fish	LC50	Bluegill (Lepomis macrochirus)	10 mg/l, 96 hour

ET HYLENEDIAMINE (CAS 107-15-3)

Components		Species	Test results
Fish	LC50	Fathead minnow (Pimephales promelas)	10 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coeffiecient n-octanol / water (log Kow)

BENZYL ALCOHOL 1.1

ET HYLENEDIAMINE -2.04, AT pH13

Mobility in soil No data 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.

Section 13. Disposal Considerations

Disposal Instructions	: 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 contain product residue, follow label warnings even after container is emptied.

Section 14. Transport Information

DOT Classification	IMDG	IATA
Not regulated as dangerous goods	Not regulated as dangerous goods	Not regulated as dangerous goods

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

Section 15. Regulatory Information

U.S. Federal regulations : All components are on the U.S. EPA TSCA Inventory List.

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

CERCLA Hazardous Substance List (40 CFR 302.4)

ET HYLENEDIAMINE (CAS 107-15-3) : Listed

US EPCRA Section 304 Extremely Haz, Subs. & CERCLA Haz. Subs.L Section 304 EHS reportable quantity

ET HYLENEDIAMINE (CAS 107-15-3) 5000 LBS

Section 15. Regulatory Information

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) : Not listed

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard Categories

Immediate Hazard - Yes

Delayed Hazard - No

Fire Hazard - No

Pressure Hazard - No

Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Chemical Name	CAS	Reportable Qty	Threshold Plan Qty	Threshold Plan Qty lower value	Threshold Plan Qty upper value
ET HYLENEDIAMINE	107-15-3	5000 LBS	10000 LBS		

SARA 311/312 Hazardous Chemicals No

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 ® Accidental Release Prevention (40 CFR 68.130)

ET HYLENEDIAMINE (CAS 107-15-3)

Safe Drinking Water Act (SDWA)

Not regulated.

US State Regulations

US. Massachusetts RTK - Substance List

BENZYL ALCOHOL (CAS 100-51-6)

ET HYLENEDIAMIONE (CAS 107-15-3)

TRIET HYLENEDIAMINE (CAS 112-24-3)

Section 15. Regulatory Information

US. New Jersey Worker and Community Right-to-know Act

ET HYLENEDIAMIONE (CAS 107-15-3) 500 LBS

US. Pennsylvania RTK - Hazardous Substances

BENZYL ALCOHOL (CAS 100-51-6)

ET HYLENEDIAMIONE (CAS 107-15-3)

TRIET HYLENEDIAMINE (CAS 112-24-3)

US. Rhode Island RTK

ET HYLENEDIAMIONE (CAS 107-15-3)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens ir reproductive toxins.

Section 15. Regulatory Information

International Inventories

Country(s) or region	Inventory Name	On Inventory (Yes/No)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemical List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

* - 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 this product are not listed or exempt from listing on the inventory administered by the governing country(s).

Section 16. Other Information

History

Date of issue mm/dd/yyyy : 11/10/2015

Version : 1

Revised sections : Not applicable

Prepared by J P Specialties, Inc.

Key to abbreviations

ACGIH - American Conference of Governmental Industrial Hygienists
AICS - Australian Inventory of Chemical Substances
AIHA - American Industrial Hygiene Association
CERCLA - Comprehensive Environmental Response Compensation and Liability Act
CWA - Clean Water Act
DOT - Department of Transportation
DSL - Canada (Domestic Substances List)
ECL - Korea (Existing Chemicals List)
ENCS - Japan (Inventory of Chemicals and Chemical Substances)
ELINCS - European List of Notified Chemical Substances
EPCRA - Environmental Protection Agency (Emergency Planning and Community Right-to-Know)
GHS - Globally Harmonized System
HCS - Hazardous Communication Standard
IATA - International Air Transport Association
IARC - International Agency of Research on Cancer
IBC - Intermediate Bulk Container
IMDG - International Maritime Dangerous Goods
LogPow - logarithm of the octanol/water partition coefficient
NDSL - Canada (Non-Domestic Substances List)
NIOSH - National Institute of Occupational Safety and Health
NTP - National Toxicology Program
OEL - Over Exposure Limit
OSHA - Occupational Safety & Health Administration
PICCS - Philippine Inventory of Chemicals and Chemical Substances
PEL - Permissable Exposure Limit
RCRA - Resource Conservation Recovery Act
RTK - Right To Know
SARA - Superfund Amendments & Reauthorization Act
TSCA - Toxic Substances Control Agency
TWA - Time Weighted Average
UN - United Nations

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