



SAFETY DATA SHEET

1. Identification

Product identifier	Earth Shield® VEN1000 Part A Epoxy
Other means of identification	
Synonyms	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 925622 USA
After hours telephone number	1-800-821-3859
Normal work hours telephone number	1-800-821-3859
Website	www.jpsspecialties.com
E-mail	jpspec@jpsspecialties.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 2B
	Sensitization, skin	Category 1B
	Carcinogenicity	Category 2
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	
Label elements		



Signal word	Warning
Hazard statement	Suspected of causing cancer by ingestion. Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction.
Precautionary statement	
Prevention	Wear protective gloves. Wear eye/face protection. Wash thoroughly after handling. Avoid breathing mist or vapor. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.
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. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention.
Storage	Store in accordance with local/regional/national regulations.

Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
PHENOL-FORMALDEHYDE POLYMER GLYCIDYL ETHER		28064-14-4	30-50
TALC (Mg3Si4O10(OH)2)		14807-96-6	20-40
QUARTZ		14808-60-7	5-15
TITANIUM DIOXIDE		13463-67-7	5-15
1,3-DIGLYCIDYLOXYBENZENE		101-90-6	4
Other components below reportable levels			20 - 40

Composition comments Other components in this product are considered non-hazardous under the criteria specified in 29 CFR 1910.1200 (Hazard Communication Standard).

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	Water fog. Foam. Dry chemical powder. Alcohol foam. Carbon dioxide (CO2).
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. For waste disposal, see section 13 of the SDS.

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. Store away from incompatible materials (see Section 10 of the SDS). 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

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
TITANIUM DIOXIDE (CAS 13463-67-7)	PEL	15 mg/m ³	Total dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
QUARTZ (CAS 14808-60-7)	TWA	0.3 mg/m ³	Total dust.
		0.1 mg/m ³	Respirable.
		2.4 mppcf	Respirable.
TALC (Mg ₃ Si ₄ O ₁₀ (OH) ₂) (CAS 14807-96-6)	TWA	0.3 mg/m ³	Total dust.
		0.1 mg/m ³	Respirable.
		20 mppcf	Respirable.
		2.4 mppcf	Respirable.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
QUARTZ (CAS 14808-60-7)	TWA	0.025 mg/m ³	Respirable fraction.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
TALC (Mg ₃ Si ₄ O ₁₀ (OH) ₂) (CAS 14807-96-6)	TWA	2 mg/m ³	Respirable fraction.
TITANIUM DIOXIDE (CAS 13463-67-7)	TWA	10 mg/m ³	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
QUARTZ (CAS 14808-60-7)	TWA	0.05 mg/m ³	Respirable dust.
TALC (Mg ₃ Si ₄ O ₁₀ (OH) ₂) (CAS 14807-96-6)	TWA	2 mg/m ³	Respirable.

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 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 82 Pa at 20°C

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	
Density	1170.00 kg/m ³ at 25°C

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	Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes eye irritation.
Ingestion	Suspected of causing cancer by ingestion. However, ingestion is not likely to be a primary route of occupational exposure.

Symptoms related to the physical, chemical and toxicological characteristics Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
1,3-DIGLYCIDYLOXYBENZENE (CAS 101-90-6)		
Acute		
Oral		
LD50	Rat	2.57 g/kg

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

Skin corrosion/irritation	Corrosive to skin and eyes.
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 sensitization by skin contact.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Possible cancer hazard based on tests with laboratory animals. 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

1,3-DIGLYCIDYLOXYBENZENE (CAS 101-90-6) 2B Possibly carcinogenic to humans.

QUARTZ (CAS 14808-60-7)
TALC (Mg₃Si₄O₁₀(OH)₂) (CAS 14807-96-6)

1 Carcinogenic to humans.
2B Possibly carcinogenic to humans.
3 Not classifiable as to carcinogenicity to humans.
2B Possibly carcinogenic to humans.

TITANIUM DIOXIDE (CAS 13463-67-7)

US. National Toxicology Program (NTP) Report on Carcinogens

1,3-DIGLYCIDYLOXYBENZENE (CAS 101-90-6)
QUARTZ (CAS 14808-60-7)

Reasonably Anticipated to be a Human Carcinogen.
Known To Be Human Carcinogen.

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

Not regulated.

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.

12. Ecological information

Ecotoxicity The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product	Species	Test Results	
VEN1000 Part A			
Aquatic			
Crustacea	EC50	Daphnia	10810.8105 mg/l, 48 hours estimated
Fish	LC50	Fish	10810.8105 mg/l, 96 hours estimated
Components	Species	Test Results	

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

Aquatic

Acute

Fish	LC50	Fish	1 - 10 mg/l
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Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential Not available.

Partition coefficient n-octanol / water (log Kow)

VEN1000 Part A > 3

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.

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

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.
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 regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Yes**Hazardous chemical****SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
1,3-DIGLYCIDYLOXYBENZENE	101-90-6	4

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**US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**

1,3-DIGLYCIDYLOXYBENZENE (CAS 101-90-6) Listed: July 1, 1989
QUARTZ (CAS 14808-60-7) Listed: October 1, 1988
TITANIUM DIOXIDE (CAS 13463-67-7) Listed: September 2, 2011

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

1,3-DIGLYCIDYLOXYBENZENE (CAS 101-90-6)
QUARTZ (CAS 14808-60-7)
TALC (Mg₃Si₄O₁₀(OH)₂) (CAS 14807-96-6)
TITANIUM DIOXIDE (CAS 13463-67-7)

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

Country(s) or region	Inventory name	On inventory (yes/no)*
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
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)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
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 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 02-25-2015

Revision date 05-02-2017

Version # 03

NFPA ratings
Health: 2
Flammability: 0
Instability: 0

References
EPA: AQUIRE database
US. IARC Monographs on Occupational Exposures to Chemical Agents
HSDB® - Hazardous Substances Data Bank
IARC Monographs. Overall Evaluation of Carcinogenicity
National Toxicology Program (NTP) Report on Carcinogens
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices

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

Revision information
Product and Company Identification: Product and Company Identification
Composition / Information on Ingredients: Ingredients
Toxicological Information: Toxicological Data
GHS: Classification



SAFETY DATA SHEET

1. Identification

Product identifier	Earth Shield® VEN1000 Part B Hardener
Other means of identification	
Synonyms	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 Avenue Murrieta, CA 925622 USA
After hours telephone number	1-800-821-3859
Normal work hours telephone number	1-800-821-3859
Website	www.jpsspecialties.com
E-mail	jpspec@jpsspecialties.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	Acute toxicity, dermal	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2
	Sensitization, skin	Category 1
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	
Label elements		



Signal word	Warning
Hazard statement	Harmful in contact with skin. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation.
Precautionary statement	
Prevention	Wear protective gloves. Wear eye/face protection. Avoid breathing mist or vapor. Avoid release to the environment. Wash thoroughly after handling. Use personal protective equipment as required. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Contaminated work clothing should not be allowed out of the workplace.
Response	Specific treatment see Section 4 of this SDS. 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. Take off contaminated clothing and wash before reuse. If eye irritation persists: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. Collect spillage.

Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
BENZYL ALCOHOL		100-51-6	15 - 25
[3-(aminoethyl)phenyl]methanamine		1477-55-0	10 - 20
[(DIMETHYLAMINO)METHYL]PHENOL		25338-55-0	0 - 5
4,4'-METHYLENEBIS(CYCLOHEXYLAMINE)		1761-71-3	0 - 5
			21.42

4. First-aid measures

Inhalation	Remove victim 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. Call a physician or poison control center immediately.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. For minor skin contact, avoid spreading material on unaffected skin. Wash contaminated clothing before reuse. Wash clothing separately 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. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. If swallowed, rinse mouth with water (only if the person is conscious). Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting. 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	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause an allergic skin reaction. Dermatitis. Rash.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. 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. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Alcohol foam. Foam. Dry chemical powder. Carbon dioxide (CO2).
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 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.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. 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. This product is miscible in water.

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 in original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Do not handle until all safety precautions have been read and understood. Do not get this material in contact with eyes. When using do not eat or drink. Do not get this material in contact with skin. Do not taste or swallow. Avoid prolonged exposure. Use personal protective equipment as required. Do not get this material on clothing. Observe good industrial hygiene practices. Do not breathe dust/fume/gas/mist/vapors/spray. Wash hands thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Store locked up. Store away from incompatible materials (see Section 10 of the SDS). Keep away from food, drink and animal feedingstuffs.

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values Components

Components	Type	Value
[3-(aminoethyl)phenyl]methanamine (CAS 1477-55-0)	Ceiling	0.1 mg/m ³

US. NIOSH: Pocket Guide to Chemical Hazards Components

Components	Type	Value
[3-(aminoethyl)phenyl]methanamine (CAS 1477-55-0)	Ceiling	0.1 mg/m ³

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides Components

Components	Type	Value
BENZYL ALCOHOL (CAS 100-51-6)	TWA	44.2 mg/m ³ 10 ppm

Biological limit values

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

Exposure guidelines

US - California OELs: Skin designation

[3-(aminoethyl)phenyl]methanamine (CAS 1477-55-0) Can be absorbed through the skin.

US - Tennessee OELs: Skin designation

[3-(aminoethyl)phenyl]methanamine (CAS 1477-55-0) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

[3-(aminoethyl)phenyl]methanamine (CAS 1477-55-0) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

[3-(aminoethyl)phenyl]methanamine (CAS 1477-55-0) Can be absorbed through the skin.

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	Chemical goggles and face shield are recommended.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Other	Skin protection should include disposable chemical resistant coveralls with hoods. Hand protection should include appropriate chemical resistant disposable gloves, such as nitrile rubber.
Respiratory protection	If in spray application, respiratory protection should include at a minimum a fullface air purifying respirator (APR) with combination particulate (P100) and organic vapor (OV) cartridges. A full-face APR has an assigned protection factor (APF) of 50, as designated by OSHA. As a substitute, a PAPR with a loose-fitting hood could be used as respiratory protection.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Do not get in eyes. Do not get this material in contact with skin. Do not get this material on clothing. Wash hands before breaks and immediately after handling the product. Keep away from food and drink.

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	1.05

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable at normal conditions.
Possibility of hazardous reactions	Hazardous polymerization can occur with elevated temperatures.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Alkaline metals. Peroxides. Fluorine. Chlorine. Phenols. Strong acids, alkalis and oxidizing agents.
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	Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation. Harmful in contact with skin.
Eye contact	Causes eye irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics Irritation of eyes and mucous membranes.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
4,4'-METHYLENEBIS(CYCLOHEXYLAMINE) (CAS 1761-71-3)		
Acute		
Oral		
LD50	Rat	380 mg/kg
BENZYL ALCOHOL (CAS 100-51-6)		
Acute		
Dermal		
LD50	Rabbit	2000 mg/kg
Oral		
LD50	Rat	1230 - 3100 mg/kg

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

Skin corrosion/irritation Irritating and may cause redness and pain.
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 sensitization by skin contact.

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

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

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

Not regulated.

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.

12. Ecological information

Ecotoxicity Harmful to aquatic life. Components of this product are hazardous to aquatic life. Accumulation in aquatic organisms is expected.

Components	Species	Test Results
BENZYL ALCOHOL (CAS 100-51-6)		
Aquatic		
Fish	LC50	Bluegill (Lepomis macrochirus)
		10 mg/l, 96 hours

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

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

BENZYL ALCOHOL 1.1

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.

13. Disposal considerations

Disposal instructions Dispose of contents/container in accordance with local/regional/national/international regulations. This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

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

UN number	UN2735
UN proper shipping name	Amine, Liquid, Corrosive, N.O.S. ([3-(aminoethyl)phenyl]methanamine)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number	UN2735
UN proper shipping name	Amine, Liquid, Corrosive, N.O.S. ([3-(aminoethyl)phenyl]methanamine)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Environmental hazards	No.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN2735
UN proper shipping name	Amine, Liquid, Corrosive, N.O.S. ([3-(aminoethyl)phenyl]methanamine)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	No.
EmS	Not available.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

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

DOT



IATA; IMDG



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.

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 regulated.

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 Yes
Hazardous chemical

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

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
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 Chemicals 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 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 02-25-2015

Revision date 05-01-2017

Version # 05

NFPA ratings
Health: 2
Flammability: 0
Instability: 0

References
EPA: AQUIRE database
US. IARC Monographs on Occupational Exposures to Chemical Agents
HSDB® - Hazardous Substances Data Bank
IARC Monographs. Overall Evaluation of Carcinogenicity
National Toxicology Program (NTP) Report on Carcinogens
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices

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

Revision information
Product and Company Identification: Product and Company Identification
Hazard(s) identification: Hazard statement
Composition / Information on Ingredients: Ingredients
Physical & Chemical Properties: Multiple Properties
Toxicological Information: Toxicological Data
GHS: Classification