# SAFETY DATA SHEET

**Issuing Date** 11-Nov- 2014 **Revision Date** 11-Nov-2014 **Revision Number** 1

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### Product identifier

**Product SDS Name** **Steel Reinforced Epoxy Resin – Twin Tubes - Part A**

### J-B Weld FG SKU Part Numbers Covered

**8265, 8265F, 8276, 8276F, 8265S, 8265A, 8265H, 8272, 8272F, 8280, 8280F, 8281, 80165, 7265S, 7280, 8276A, 8273H, 8270, 8270F, 8271, 80176, 7276, 7270**

### J-B Weld Product Names Covered

**J-B Weld™ (all Twin Tubes), KwikWeld™ (all Twin Tubes), MarineWeld™ (Twin Tubes Only)**

### J-B Weld Product Type

**Steel Reinforced Epoxy**

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

| | |
|---|---|
| **Recommended Use** | General Purpose Adhesive |
| **Uses advised against** | No information available |

**Details of the supplier of the safety data sheet**

| | |
|---|---|
| **Supplier Name** | J-B WELD COMPANY,LLC |
| **Supplier Address** | 1130 COMO ST<br>SULPHUR SPRINGS, TX 75482<br>USA |
| **Emergency Telephone Numbers** | Transportation Emergencies: Chemtrec (24 hour transportation emergency response info): 800-424-9300 or 703-527-3887<br><br>Poison/Medical Emergencies: Poison Control Centers (24 hour emergency poison / medical response info): 800-222-1222 |
| **Supplier Email** | info@jbweld.com |
| **Supplier Phone Number** | 903-885-7696 |

## 2. HAZARDS IDENTIFICATION

| | |
|---|---|
| **OSHA/HCS status** | This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). |
| **Classification of the substance or mixture** | SKIN CORROSION/IRRITATION - Category 2<br>SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B<br>SKIN SENSITIZATION - Category 1 |
| **GHS label elements** | |

| | |
|---|---|
| **Hazard pictograms** | |
| **Signal word** | Warning! |
| **Hazard statements** | Causes skin and eye irritation.<br>May cause an allergic skin reaction. |

**Precautionary statements**

| | |
|---|---|
| **Prevention** | Wear protective gloves. Wear eye or face protection. Avoid breathing dust. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. |
| **Response** | IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. |
| **Storage** | Not applicable. |
| **Disposal** | Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| **Hazards not otherwise classified** | None known. |

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance/mixture** Mixture

| Ingredient name | % by weight | CAS number |
|---|---|---|
| reaction product: bisphenol-A-(epichlorhydrin); epoxy resin | 10 - 30 | 25068-38-6 |
| crystalline silica non-respirable | 0.1 - 1 | 14808-60-7 |
| carbon black respirable | 0.1 - 1 | 1333-86-4 |

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

## 4. FIRST AID MEASURES

**Description of necessary first aid measures**

| | |
|---|---|
| **Inhalation** | Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |
| **Skin contact** | Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse. |
| **Eye contact** | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. |
| **Ingestion** | Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |

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

**Potential acute health effects**

| | |
|---|---|
| **Inhalation** | No known significant effects or critical hazards. |
| **Skin contact** | Causes skin irritation. May cause an allergic skin reaction. |
| **Eye contact** | Causes serious eye irritation. |
| **Ingestion** | Irritating to mouth, throat and stomach. |

**Over-exposure signs/symptoms**

**Inhalation** No specific data.

**Skin contact** Adverse symptoms may include the following:
irritation
redness

**Eye contact** Adverse symptoms may include the following:
pain or irritation
watering
redness

**Ingestion** No specific data.

**Indication of immediate medical attention and special treatment needed, if necessary**

**Notes to physician** Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments** No specific treatment.

**See toxicological information (Section 11)**

## 5. FIRE-FIGHTING MEASURES

**Extinguishing media**

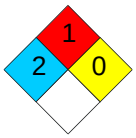
**Suitable extinguishing media** Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** None known.

**Specific hazards arising from the chemical** No specific fire or explosion hazard.

**National Fire Protection Association (U.S.A.)**

**Health**




**Flammability**

**Instability/Reactivity**

**Special**

**Hazardous thermal decomposition products** Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
halogenated compounds
metal oxide/oxides

**Special protective actions for fire-fighters** Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

# 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. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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 dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). |

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

| | |
|---|---|
| **Small spill** | Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. |
| **Large spill** | Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. |

# 7. HANDLING AND STORAGE

| | |
|---|---|
| **Conditions for safe storage, including any incompatibilities** | Do not store below the following temperature: 35°C (95°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. |

**Precautions for safe handling**

| | |
|---|---|
| **Protective measures** | Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. |
| **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 face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. |

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## Control parameters

### Occupational exposure limits

| Ingredient name | CAS # | Exposure limits |
|---|---|---|
| crystalline silica non-respirable | 14808-60-7 | **OSHA PEL Z3 (United States, 9/2005). Notes: 250/(%SiO2+5)** TWA: 250 MPPCF / (%SiO2+5) 8 hours. Form: Respirable **OSHA PEL Z3 (United States, 9/2005). Notes: 10/(SiO2+2)** TWA: 10 MG/M3 / (%SiO2+2) 8 hours. Form: Respirable **ACGIH TLV (United States, 3/2012).** TWA: 0.025 mg/m³ 8 hours. Form: Respirable fraction **NIOSH REL (United States, 1/2013).** TWA: 0.05 mg/m³ 10 hours. Form: respirable dust **OSHA PEL Z3 (United States, 9/2005). Notes: 30/(%SiO2+2)** TWA: 30 MG/M3 / (%SiO2+2) 8 hours. Form: Total dust. |
| carbon black respirable | 1333-86-4 | **OSHA PEL 1989 (United States, 3/1989).** TWA: 3.5 mg/m³ 8 hours. **ACGIH TLV (United States, 6/2013).** TWA: 3 mg/m³ 8 hours. Form: Inhalable fraction **NIOSH REL (United States, 10/2013).** TWA: 3.5 mg/m³ 10 hours. TWA: 0.1 mg of PAHs/cm³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 3.5 mg/m³ 8 hours. |

**Appropriate engineering controls**
No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

**Environmental exposure controls**
Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## Individual protection measures

**Hygiene measures**
Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Respiratory protection**
Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**Skin protection**

**Hand protection**
Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection**
Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

| | |
|---|---|
| **Other skin protection** | Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. |
| **Eye/face protection** | Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases, or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles. |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| **Physical state** | Solid. |
| **Color** | Black. [Dark] |
| **Odor** | Ethereal. [Slight] |
| **Odor threshold** | Not available. |
| **pH** | Not available. |
| **Melting point** | Not available. |
| **Boiling point** | Not available. |
| **Flash point** | Closed cup: >93.3°C (>199.9°F) [Setaflash.] [Product does not sustain combustion.] |
| **Evaporation rate** | Not available. |
| **Flammability (solid, gas)** | Extremely flammable in the presence of the following materials or conditions: open flames, sparks and static discharge.<br>Non-flammable in the presence of the following materials or conditions: heat, shocks and mechanical impacts, oxidizing materials, reducing materials, combustible materials, organic materials, metals, acids, alkalis and moisture. |
| **Lower and upper explosive (flammable) limits** | Not available. |
| **Vapor pressure** | Not available. |
| **Vapor density** | Not available. |
| **Relative density** | 1.927 |
| **Solubility** | Insoluble in the following materials: cold water and hot water. |
| **Solubility in water** | Not available. |
| **Auto-ignition temperature** | Not available. |
| **Decomposition temperature** | >220°C (>428°F) |
| **Viscosity** | Not available. |
| **VOC (% content)** | <1% |

## 10. STABILITY AND REACTIVITY

| | |
|---|---|
| **Reactivity** | No specific test data related to reactivity available for this product or its ingredients. |
| **Chemical stability** | The product is stable. |
| **Possibility of hazardous reactions** | Under normal conditions of storage and use, hazardous reactions will not occur. |
| **Conditions to avoid** | No specific data |
| **Incompatible materials** | No specific data |
| **Hazardous decomposition products** | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

# 11. TOXICOLOGICAL INFORMATION

## Information on toxicological effects

### Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---|---|---|---|
| carbon black respirable | LD50 Oral | Rat | >15400 mg/kg | - |

### Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|---|---|---|---|---|
| reaction product: bisphenol-A(epichlorhydrin); epoxy resin | Eyes - Mild irritant | Rabbit | - | 100 milligrams | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 500 microliters | - |
| | Skin - Severe irritant | Rabbit | - | 24 hours 2 milligrams | - |

### Sensitization

No specific data.

### Mutagenicity

No specific data.

### Carcinogenicity

No specific data.

### Classification

| Product/ingredient name | OSHA | IARC | NTP |
|---|---|---|---|
| crystalline silica nonrespirable | - | 1 | Known to be a human carcinogen. |
| carbon black respirable | - | 2B | - |

### Reproductive toxicity

No specific data.

### Teratogenicity

No specific data.

### Specific target organ toxicity (single exposure)

No specific data.

### Specific target organ toxicity (repeated exposure)

No specific data.

### Aspiration hazard

No specific data.

**Information on the likely routes of exposure** Not available.

### Potential acute health effects

**Eye contact** Causes serious eye irritation.

**Inhalation** No known significant effects or critical hazards.

**Skin contact** Causes skin irritation. May cause an allergic skin reaction.

**Ingestion** Irritating to mouth, throat and stomach.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** Adverse symptoms may include the following:
pain or irritation
watering
redness

**Inhalation** No specific data.

**Skin contact** Adverse symptoms may include the following:
irritation
redness

**Ingestion** No specific data.

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Short term exposure**

**Potential immediate effects** Not available.

**Potential delayed effects** Not available.

**Long term exposure**

**Potential immediate effects** Not available.

**Potential delayed effects** Not available.

**Potential chronic health effects** No specific data.

**General** Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** No known significant effects or critical hazards.

**Mutagenicity** No known significant effects or critical hazards.

**Teratogenicity** No known significant effects or critical hazards.

**Developmental effects** No known significant effects or critical hazards.

**Fertility effects** No known significant effects or critical hazards.

**Numerical measures of toxicity**

**Acute toxicity estimates** No specific data.

## 12. ECOLOGICAL INFORMATION

**Toxicity**
No specific data.

**Persistence and degradability**
No specific data.

**Bioaccumulative potential**

| Product/ingredient name | $LogP_{ow}$ | BCF | Potential |
|---|---|---|---|
| reaction product: bisphenol-A(epichlorhydrin); epoxy resin | 2.64 to 3.78 | 31 | low |

**Mobility in soil**
**Soil/water partition coefficient ($K_{OC}$)** Not available.

**Other adverse effects** No known significant effects or critical hazards.

## 13. DISPOSAL CONSIDERATIONS

| | |
|---|---|
| **Disposal methods** | The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. |
| **RCRA classification** | Not available. |

## 14. TRANSPORT INFORMATION

| | DOT Classification | TDG Classification | Mexico Classification | IMDG | IATA |
|---|---|---|---|---|---|
| **UN Number** | Not regulated. | Not regulated. | Not regulated. | Not regulated. | Not regulated. |
| **UN proper shipping name** | - | - | - | - | - |
| **Transport hazard class(es)** | - | - | - | - | - |
| **Packing group** | - | - | - | - | - |
| **Environmental hazards** | No. | No. | No. | No. | No. |
| **Additional information** | - | - | - | - | - |

**Special precautions for user** **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

## 15. REGULATORY INFORMATION

**U.S. Federal regulations**

**TSCA 8(a) PAIR**: Siloxanes and Silicones, di-Me, reaction products with silica
**TSCA 9(a) CDR Exempt/partial exemption**: Not determined
**United States Inventory (TSCA 8b):** All components are listed or exempted.

| | |
|---|---|
| **Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)** | Not listed |
| **Clean Air Act Section 602 Class I Substances** | Not listed |
| **Clean Air Act Section 602 Class II Substances** | Not listed |

**SARA 302/304**

| | |
|---|---|
| **Composition/information on ingredients** | No products were found. |
| **SARA 304 RQ** | Not applicable |

**SARA 311/312**

**Classification** Immediate (acute) health hazard

## Composition / information on ingredients

| Name | % | Fire hazard | Sudden release of pressure | Reactive | Immediate (acute) health hazard | Delayed (chronic) health hazard |
|---|---|---|---|---|---|---|
| reaction product: bisphenol-A-(epichlorhydrin); epoxy resin | 10-30 | No. | No. | No. | Yes. | No. |
| crystalline silica non-respirable | 0.1-1 | No. | No. | No. | No. | Yes |
| carbon black respirable | 0.1-1 | No. | No. | No. | No. | Yes. |

## State regulations

**Massachusetts** The following components are listed: CALCIUM CARBONATE

**New York** None of the components are listed.

**New Jersey** The following components are listed: CALCIUM CARBONATE; LIMESTONE, SILICA, QUARTZ; QUARTZ (SiO2); CARBON BLACK

**Pennsylvania** The following components are listed: LIMESTONE; QUARTS (SiO2); CARBON BLACK

**Minnesota Hazardous Substances** None of the components are listed.

## California Prop. 65

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

| Ingredient Name | Cancer | Reproductive | No significant risk level | Maximum acceptable dosage level |
|---|---|---|---|---|
| crystalline silica non-respirable | Yes. | No. | No. | No. |
| carbon black respirable | Yes. | No. | No. | No. |

**Canada inventory** All components are listed or exempted.

## International regulations

**International lists**

**Australia inventory (AICS):** All components are listed or exempted.
**China inventory (IECSC):** All components are listed or exempted.
**Japan inventory:** Not determined.
**Korea inventory:** All components are listed or exempted.
**Malaysia Inventory (EHS Register):** Not determined.
**New Zealand Inventory of Chemicals (NZIoC):** Not determined.
**Phillipines inventory (PICCS):** All components are listed or exempted.
**Taiwan inventory (CSNN):** Not determined.

**Substances of very high concern** None of the components are listed.

# 16. OTHER INFORMATION

**Key to abbreviations** ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

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# SAFETY DATA SHEET

**Issuing Date** 11-Nov- 2014 **Revision Date** 11-Nov-2014 **Revision Number** 1

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### Product identifier

**Product SDS Name** **Steel Reinforced Epoxy Hardener – Slow Cure – Twin Tubes - Part B**

### J-B Weld FG SKU Part Numbers Covered

**8265, 8265F, 8265S, 8265A, 8265H, 8272, 8272F, 8280, 8280F, 8281, 80165, 7265S, 7280**

### J-B Weld Product Names Covered

**J-B Weld™ (Twin Tubes), MarineWeld™ (Twin Tubes Only)**

### J-B Weld Product Type

**Steel Reinforced Epoxy**

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

| | |
|---|---|
| **Recommended Use** | General Purpose Adhesive |
| **Uses advised against** | No information available |

**Details of the supplier of the safety data sheet**

| | |
|---|---|
| **Supplier Name** | J-B WELD COMPANY,LLC |
| **Supplier Address** | 1130 COMO ST<br>SULPHUR SPRINGS, TX 75482<br>USA |
| **Emergency Telephone Numbers** | Transportation Emergencies: Chemtrec (24 hour transportation emergency response info): 800-424-9300 or 703-527-3887<br>Poison/Medical Emergencies: Poison Control Centers (24 hour emergency poison / medical response info): 800-222-1222 |
| **Supplier Email** | info@jbweld.com |
| **Supplier Phone Number** | 903-885-7696 |

## 2. HAZARDS IDENTIFICATION

| | |
|---|---|
| **OSHA/HCS status** | This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). |
| **Classification of the substance or mixture** | ACUTE TOXICITY: ORAL - Category 4<br>ACUTE TOXICITY: INHALATION – Category 4 |
| **GHS label elements** | |
| **Hazard pictograms** | |
| **Signal word** | Warning! |
| **Hazard statements** | Harmful if swallowed or if inhaled. |

**Precautionary statements**

**Prevention** Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

**Response** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth.

**Storage** Not applicable.

**Disposal** Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Hazards not otherwise classified** None known.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance/mixture** Mixture

| Ingredient name | % by weight | CAS number |
|---|---|---|
| benzyl alcohol | 1-5 | 100-51-6 |
| titanium dioxide | 1-5 | 13463-67-7 |
| 2,4,6-tris(dimethylaminomethyl)phenol | 1-5 | 90-72-2 |

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

## 4. FIRST AID MEASURES

**Description of necessary first aid measures**

**Inhalation** Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Skin contact** Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Eye contact** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

**Ingestion** Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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

**Potential acute health effects**

**Inhalation** Harmful if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

**Skin contact** No known significant effects or critical hazards.

**Eye contact** No known significant effects or critical hazards.

**Ingestion** Harmful if swallowed.

**Over-exposure signs/symptoms**

**Inhalation** No specific data.

**Skin contact** No specific data.

**Eye contact** No specific data.

**Ingestion** No specific data.

**Indication of immediate medical attention and special treatment needed, if necessary**

**Notes to physician** In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Specific treatments** No specific treatment.

**See toxicological information (Section 11)**

## 5. FIRE-FIGHTING MEASURES

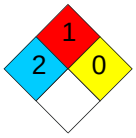
**Extinguishing media**

**Suitable extinguishing media** Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** None known.

**Specific hazards arising from the chemical** In a fire or if heated, a pressure increase will occur and the container may burst

**National Fire Protection Association (U.S.A.)**




**Health**

**Flammability**

**Instability/Reactivity**

**Special**

**Hazardous thermal decomposition products**

Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
metal oxide/oxides

**Special protective actions for fire-fighters**

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters**

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

# 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. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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 dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). |

## Methods and materials for containment and cleaning up

| | |
|---|---|
| **Small spill** | Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. |
| **Large spill** | Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations 9see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose some hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. |

# 7. HANDLING AND STORAGE

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

Do not store below the following temperature: 35°C (95°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

**Precautions for safe handling**

**Protective measures**

Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

**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 face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

**Occupational exposure limits**

| Ingredient name | CAS # | Exposure limits |
|---|---|---|
| benzyl alcohol | 100-51-6 | **AIHA WEEL (United States, 10/2011).**<br>TWA: 10 ppm 8 hours. |
| titanium dioxide | 13463-67-7 | **ACGIH TLV (United States, 3/2012).**<br>TWA: 10 mg/ $m^3$ 8 hours.<br>**OSHA PEL 1989 (United States, 3/1989).**<br>TWA: 10 mg/ $m^3$ 8 hours. Form: Total dust.<br>**OSHA PEL (United States, 6/2010).**<br>TWA: 15 mg/ $m^3$ 8 hours. Form: Total dust. |

**Appropriate engineering controls**

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Environmental exposure controls**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Individual protection measures**

**Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Respiratory protection**

Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**Skin protection**

| | |
|---|---|
| **Hand protection** | Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. |
| **Body protection** | Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. |
| **Other skin protection** | Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. |
| **Eye/face protection** | Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases, or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| **Physical state** | Liquid. |
| **Color** | White. |
| **Odor** | Amine-like. |
| **Odor threshold** | Not available. |
| **pH** | Not available. |
| **Melting point** | Not available. |
| **Boiling point** | Not available. |
| **Flash point** | Closed cup: >93.3°C (>199.9°F) [Setaflash.] [Product does not sustain combustion.] |
| **Evaporation rate** | Not available. |
| **Flammability (solid, gas)** | Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge. |
| **Lower and upper explosive (flammable) limits** | Not available. |
| **Vapor pressure** | Not available. |
| **Vapor density** | Not available. |
| **Relative density** | 1.955 |
| **Solubility** | Not available. |
| **Solubility in water** | Not available. |
| **Auto-ignition temperature** | Not available. |
| **Decomposition temperature** | >220°C (>392°F) |
| **Viscosity** | Not available. |
| **VOC (% content)** | <1% |

## 10. STABILITY AND REACTIVITY

| | |
|---|---|
| **Reactivity** | No specific test data related to reactivity available for this product or its ingredients. |
| **Chemical stability** | The product is stable. |

| | |
|---|---|
| **Possibility of hazardous reactions** | Under normal conditions of storage and use, hazardous reactions will not occur. |
| **Conditions to avoid** | No specific data |
| **Incompatible materials** | No specific data |
| **Hazardous decomposition products** | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

# 11. TOXICOLOGICAL INFORMATION

## Information on toxicological effects

### Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---|---|---|---|
| Benzyl alcohol | LD50 Oral | Rat | 1230 mg/kg | - |
| 2,4,6-tris (dimethylaminomethyl)phenol | LD50 Dermal<br>LD50 Oral | Rat<br>Rat | 1280 mg/kg<br>1200 mg/kg | -<br>- |

### Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|---|---|---|---|---|
| benzyl alcohol | Skin – mild irritant<br>Skin – Moderate irritant<br>Skin – Moderate irritant | Man<br>Pig<br>Rabbit | -<br>-<br>- | 48 hours 16 milligrams<br>100 Percent<br>24 hours 100 milligrams | -<br>-<br>- |
| titanium dioxide | Skin – Mild Irritant | Human | - | 72 hours 300 Micrograms Intermittent | - |
| 2,4,6-tris (dimethylaminomethyl)phenol | Eyes – Severe irritant<br>Skin – mild irritant<br>Skin – Severe irritant<br>Skin – Severe irritant | Rabbit<br>Rat<br>Rat<br>Rabbit | -<br>-<br>-<br>- | 24 hours 50 Micrograms<br>0.025 Mililiters<br>0.25 Mililiters<br>24 hours 2 milligrams | -<br>-<br>-<br>- |

### Sensitization

No specific data.

### Mutagenicity

No specific data.

### Carcinogenicity

No specific data.

### Classification

| Product/ingredient name | OSHA | IARC | NTP |
|---|---|---|---|
| titanium dioxide | - | 2B | - |

### Reproductive toxicity

No specific data.

### Teratogenicity

No specific data.

### Specific target organ toxicity (single exposure)

No specific data.

### Specific target organ toxicity (repeated exposure)

No specific data.

### Aspiration hazard

No specific data.

**Information on the likely routes of exposure** Not available.

### Potential acute health effects

**Eye contact** No known significant effects or critical hazards.

**Inhalation** Harmful if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

**Skin contact** No known significant effects or critical hazards.

**Ingestion** Harmful if swallowed.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** No specific data.

**Inhalation** No specific data.

**Skin contact** No specific data.

**Ingestion** No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** Not available.

**Potential delayed effects** Not available.

#### Long term exposure

**Potential immediate effects** Not available.

**Potential delayed effects** Not available.

**Potential chronic health effects** No specific data.

**General** No known significant effects or critical hazards.

**Carcinogenicity** No known significant effects or critical hazards.

**Mutagenicity** No known significant effects or critical hazards.

**Teratogenicity** No known significant effects or critical hazards.

**Developmental effects** No known significant effects or critical hazards.

**Fertility effects** No known significant effects or critical hazards.

### Numerical measures of toxicity

**Acute toxicity estimates**

| Route | ATE value |
|---|---|
| Oral<br>Dermal | 1969.5 mg/kg<br>8745 mg/kg |
| Inhalation (dusts and mists) | 3.551 mg/l |

# 12. ECOLOGICAL INFORMATION

**Toxicity**

| Product/ingredient name | Result | Species | Exposure |
|---|---|---|---|
| benzyl alcohol | Acute LC50 460000µg/l Fresh water | Fish – Pimephales, promelas – Juvenile (Fledgling, Hatchling, Weanling) | 96 hours |
| titanium dioxide | Acute LC50 1000000µg/l Marine water | Fish – Fundulus heteroclitus | 96 hours |

**Persistence and degradability**

No specific data.

**Bioaccumulative potential**

| Product/ingredient name | $LogP_{ow}$ | BCF | Potential |
|---|---|---|---|
| benzyl alcohol | 0.87 | - | low |
| titanium dioxide | - | 352 | low |
| 2,4,6-tris 9dimethylaminomethyl) phenol | 0.219 | - | low |

**Mobility in soil**

**Soil/water partition coefficient ($K_{OC}$)** Not available.

**Other adverse effects** No known significant effects or critical hazards.

# 13. DISPOSAL CONSIDERATIONS

**Disposal methods** The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**RCRA classification** Not available.

# 14. TRANSPORT INFORMATION

| | DOT Classification | TDG Classification | Mexico Classification | IMDG | IATA |
|---|---|---|---|---|---|
| **UN Number** | Not regulated. | Not regulated. | Not regulated. | Not regulated. | Not regulated. |
| **UN proper shipping name** | - | - | - | - | - |
| **Transport hazard class(es)** | - | - | - | - | - |
| **Packing group** | - | - | - | - | - |
| **Environmental hazards** | No. | No. | No. | No. | No. |
| **Additional information** | - | - | - | - | - |

**Special precautions for user** **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

# 15. REGULATORY INFORMATION

**U.S. Federal regulations** **TSCA 8(a) PAIR**: Siloxanes and Silicones, di-Me, reaction products with silica
**TSCA 9(a) CDR Exempt/partial exemption**: Not determined
**United States Inventory (TSCA 8b):** All components are listed or exempted.

**Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)** Not listed

**Clean Air Act Section 602 Class I Substances** Not listed

**Clean Air Act Section 602 Class II Substances** Not listed

**SARA 302/304**

**Composition/information on ingredients** No products were found.

**SARA 304 RQ** Not applicable

**SARA 311/312**

**Classification** Immediate (acute) health hazard

**Composition / information on ingredients**

| Name | % | Fire hazard | Sudden release of pressure | Reactive | Immediate (acute) health hazard | Delayed (chronic) health hazard |
|---|---|---|---|---|---|---|
| benzyl alcohol | 1-5 | No. | No. | No. | Yes. | No. |
| titanium dioxide | 1-5 | No. | No. | No. | No. | Yes |
| 2,4,6-tris (dimethylaminomethyl)phenol | 1-5 | No. | No. | No. | Yes. | No. |

**State regulations**

**Massachusetts** The following components are listed: BARIUM SULFATE; BENZYL ALCOHOL; TETRAETHYLENE PENTAMINE; CALCIUM CARBONATE; TITANIUM DIOXIDE

**New York** None of the components are listed.

**New Jersey** The following components are listed: BARIUM SULFATE; SULFURIC ACID; BARIUM SALT (1:1); PROPYLENE GLYCOL; 1,2-PROPANEDIOL; TETRAETHYLENEPENTAMINE; 1,2-ETHANEDIAMINE, N-(2-AMINOETHYL)N'-[2-[(2-AMINOETHYL)AMINO]ETHYL]-; CALCIUM CARBONATE; LIMESTONE; TITANIUM DIOXIDE; TITANIUM OXIDE (TiO2)

**Pennsylvania** The following components are listed: BARIUM SULFATE; 1,2-PROPANEDIOL; BENZENEMETHANOL; 1,2-ETHANEDIAMINE, N-(2-AMINOETHYL)-N'[2-[(2-AMINOETHYL)AMINO]ETHYL]-; LIMESTONE; TITANIUM OXIDE (TiO2)

**Minnesota Hazardous Substances** None of the components are listed.

**California Prop. 65**

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

| Ingredient Name | Cancer | Reproductive | No significant risk level | Maximum acceptable dosage level |
|---|---|---|---|---|
| titanium dioxide | Yes. | No. | No. | No. |
| crystalline silica non-respirable | Yes. | No. | No. | No. |

**Canada inventory** All components are listed or exempted.

**International regulations**

**International lists**

**Australia inventory (AICS):** All components are listed or exempted.
**China inventory (IECSC):** All components are listed or exempted.
**Japan inventory:** Not determined.
**Korea inventory:** All components are listed or exempted.
**Malaysia Inventory (EHS Register):** Not determined.
**New Zealand Inventory of Chemicals (NZIoC):** All components are listed or exempted.
**Phillipines inventory (PICCS):** All components are listed or exempted.
**Taiwan inventory (CSNN):** Not determined.

**Substances of very high concern** None of the components are listed.

## 16. OTHER INFORMATION

**Key to abbreviations**

ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

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