

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 chemica	al and restrictions on use					
Recommended Use	General Purpose Adhesive					
Uses advised against	No information available					
Details of the supplier of the safet	y data sheet					
Supplier Name	J-B WELD COMPANY,LLC					
Supplier Address	1130 COMO ST SULPHUR SPRINGS, TX 75482 USA					
Emergency Telephone Numbers	Transportation Emergencies: Chemtrec (24 hour transportation emergency response info): 800-424-9300 or 703-527-3887					
	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	SKIN CORROSION/IRRITATION - Category 2					
substance or mixture	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B					
GHS label elements	SKIN SENSITIZATION - Category 1					
Hazard pictograms						
Signal word	Warning!					
Hazard statements	Causes skin and eye irritation.					

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

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.

Mixture

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. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove Eye contact 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 imr	nediate 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 Associ	ation (U.S.A.)					
	Flammability					
Health 2 0	Instability/Reactivity					
	Special					
Hazardous thermal	Decomposition products may include the following materials:					
decomposition products	carbon dioxide					
	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.
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. HA	NDLING 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

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

nal 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/m ³ 8 hours. Form: Respirable fraction NIOSH REL (United States, 1/2013). TWA: 0.05 mg/m ³ 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/m ³ 8 hours. ACGIH TLV (United States, 6/2013). TWA: 3 mg/m ³ 8 hours. Form: Inhalable fraction NIOSH REL (United States, 10/2013). TWA: 3.5 mg/m ³ 10 hours. TWA: 0.1 mg of PAHs/cm ³ 10 hours. OSHA PEL (United States, 2/2013). TWA: 3.5 mg/m ³ 8 hours.

Appropriate engineering controls Environmental exposure 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. 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 mea	<u>sures</u>
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.
рН	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. 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

Hazardous decomposition
productsUnder normal conditions of storage and use, hazardous decomposition products should
not be produced.

No specific data



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	Spec	ies	Score		Exposure	Observation
reaction product: bisphenol- A(epichlorhydrin); epoxy resin	Eyes - Mild irritant	Rabb	oit	-		100 milligrams	-
	Skin - Moderate irritant	Rabb	oit	-		24 hours 500 microliters	-
	Skin - Severe irritant	Rabb	oit	-		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	LogPow	BCF	Potential
reaction product: bisphenol-A(epichlorhydrin); epoxy resin	2.64 to 3.78	31	low

Mobility in soil

Soil/water partition coefficient (Koc) 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	ΙΑΤΑ	
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 Silic TSCA 9(a) CDR Exempt/partial exe United States Inventory (TSCA 8b)	ones, di-Me, reaction products with silica mption : Not determined : All components are listed or exempted.		
Clean Air Act Section 112(b) H	lazardous Air Pollutants (HAPs)	Not listed		
Clean Air Act Section 602 Clas	ss I Substances	Not listed		
Clean Air Act Section 602 Class II Substances		Not listed		
SARA 302/304				
Composition/information on in	ngredients	No products were found.		
SARA 304 RQ	Not applicable			



SARA 311/312

Classification

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 S	ubstances 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
International regulationsAll components are listed or exempted.International listsAustralia inventory (AICS): All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory (EHS Register): Not determined.
Malaysia Inventory (EHS Register): Not determined.
New Zealand 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 = Internediate 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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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 SULPHUR SPRINGS, TX 75482 USA **Emergency Telephone Numbers** Transportation Emergencies: Chemtrec (24 hour transportation emergency response info): 800-424-9300 or 703-527-3887 Poison/Medical Emergencies: Poison Control Centers (24 hour emergency poison / medical response info): 800-222-1222 info@jbweld.com Supplier Email 903-885-7696 **Supplier Phone Number** 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

substance or mixture GHS label elements

Hazard pictograms Signal word Hazard statements Warning!

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

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.

Mixture

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. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if **Skin contact** symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove Eye contact 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/eff	ects, 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/s	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 Unsuitable extinguishing med	Use an extinguishing agent suitable for the surrounding fire. ia None known.		
Specific hazards arising from the chemical National Fire Protection Associ	In a fire or if heated, a pressure increase will occur and the container may burst ation (U.S.A.)		
Health 200	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 above 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 uprigh 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). TWA: 10 ppm 8 hours.	
titanium dioxide	13463-67-7	ACGIH TLV (United States, 3/2012). TWA: 10 mg/ m ³ 8 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 10 mg/ m ³ 8 hours. Form: Total dust. OSHA PEL (United States, 6/2010). 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 measured	sures
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.
рН	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 Viscosity VOC (% content)	>220°C (>392°F) Not available. <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

-			
Ac	ute	tox	icitv

Product/ingredient name	Result		Species		Dose	Exposure	
Benzyl alcohol	LD50 Oral		Rat		1230 mg/kg	-	
2,4,6-tris (dimethylaminomethyl)phenol	LD50 Dermal LD50 Oral		Rat Rat		1280 mg/kg 1200 mg/kg	-	
Irritation/Corrosion							
Product/ingredient name	Result	Spee	cies	Score	Exposure	Observation	
benzyl alcohol	Skin – mild irritant	Man		-	48 hours 16 milligrams	-	
	Skin – Moderate irritant	Pig		-	100 Percent	-	
	Skin – Moderate irritant	Rabb	bit	-	24 hours 100 milligrams	-	
titanium dioxide	Skin – Mild Irritant	Hum	an	-	72 hours 300 Micrograms Intermittent	-	
2,4,6-tris (dimethylaminomethyl)phenol	Eyes – Severe irritant	Rabb	bit	-	24 hours 50 Micrograms	-	
	Skin – mild irritant	Rat		-	0.025 Mililiters	-	
	Skin – Severe irritant	Rat		-	0.25 Mililiters	-	
	Skin – Severe irritant	Rabb	bit	-	24 hours 2 milligrams	-	

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 Ingestion	No specific data. 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 toutation	

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	1969.5 mg/kg
Dermal	8745 mg/kg
Inhalation (dusts and mists)	3.551 mg/l



12. ECOLOGICAL INFORMATION

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	LogPow	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 (Koc) 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	ΙΑΤΑ	
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.

Not listed

Not listed

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

Clean Air Act Section 602 Class I Substances

Clean Air Act Section 602 Class II Substances

SARA 302/304

Composition/information on ingredients

SARA 304 RQ Not applicable

No products were found.

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)		
Annesota 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 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 conce	ern 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 = Internediate 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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