

## 1 IDENTIFICATION

<b>Product identifier</b>	<b>Rapid Set Fast Anchoring &amp; Repair Adhesive (Part A)</b>
<b>Other means of identification</b>	
<b>Product code</b>	<b>196031009</b>
<b>Recommended use</b>	Industrial use
<b>Recommended restrictions</b>	Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Company name</b>	CTS Cement Manufacturing Corporation
<b>Address</b>	11065 Knott Ave Suite A Cypress, CA 90630 United States
<b>Telephone</b>	1-800-929-3030
<b>E-mail</b>	<a href="mailto:info@ctscement.com">info@ctscement.com</a>
<b>Contact person</b>	Safety Officer
<b>Emergency telephone number</b>	1-800-929-3030 (8 AM - 5 PM)

## 2 HAZARDS IDENTIFICATION

<b>Physical hazards</b>	Hazardous	
<b>Health Hazards</b>	Skin sensitization	Category 1B
	Skin irritation	Category 2
	Eye damage/eye irritation	Category 2A
	Acute Aquatic Toxicity	Category 2
	Chronic Aquatic Toxicity	Category 2

**OSHA defined hazards** Not classified

**Label elements**

**Pictogram(s):**



**Signal Word** Warning

<b>Hazard statement</b>	H315+H320: Can cause eye and skin irritation and sensitization H317: May cause allergic skin reaction H335: May cause respiratory tract irritation H411: Toxic to aquatic life with long lasting effects
<b>Precautionary statement</b>	
<b>Prevention</b>	P261: Do not breathe dust/fume/gas/mist/vapors/spray P264: Wash skin thoroughly after handling P272: Contaminated clothing should not be allowed out of the workplace P273: Avoid release to environment P280: Wear protective gloves/protective clothing/eye protection/face protection
<b>Response</b>	P302+P352: If on skin: wash with plenty of soap and water P305+P351+P338: If in eyes: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. P333+P313: If skin irritation or rash occurs: get medical advice/attention P337+P313: If eye irritation persists: get medical advice/attention P361+P364: Take off contaminated clothing and wash before reuse P391: Collect spillage
<b>Disposal</b>	P501: Dispose of contents/container in accordance with local/regional/national /international regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.

### 3 COMPOSITIONS/INFORMATION ON INGREDIENTS

#### Mixtures

Chemical name	CAS number	Concentration
4,4'-Isopropylidiphenol-Epichlorohydrin Copolymer	025068-38-6	60 – 100
Trimethylolethane Triglycidyl Ether	068460-21-9	1 – 5
Titanium Dioxide	013463-67-7	1 – 5

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

### 4 FIRST-AID MEASURES

<b>Inhalation</b>	Remove the affected person immediately to fresh air. If breathing becomes worse, seek medical attention. Give assisted respiration if breathing has stopped or is labored (Call a physician).
<b>Skin contact</b>	Remove product and flush affected area with water for 15 minutes. If irritation persists get medical attention.

<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
<b>Ingestion</b>	Immediately rinse mouth and drink 3-4 glasses of milk or water if person conscious. Do not induce vomiting. Seek medical attention, care and treatment.
<b>Most important symptoms/effects, acute and delayed</b>	Remove affected person from area. Treat symptomatically.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

## 5 FIRE-FIGHTING MEASURES

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<b>Suitable extinguishing media</b>	Ignition may give rise to a Class B fire. In case of fire use: water fog, carbon dioxide, dry chemical, alcohol foam.
<b>Unsuitable extinguishing media</b>	Not determined.
<b>Specific hazards arising from the chemical</b>	Ignition may give rise to a Class B fire. May generate toxic or irritating combustion products. Sudden reaction and fire may result if product is mixed with an oxidizing agent.
<b>Special protective equipment</b>	Firefighters and others exposed to vapors or products of combustion should wear butyl rubber boots, gloves, and body suit. Self-contained breathing apparatus should be worn.
<b>Firefighting equipment/instructions</b>	Firefighters and others exposed to vapors or products of combustion should wear butyl rubber boots, gloves, and body suit. Self-contained breathing apparatus should be worn.
<b>Specific methods</b>	Use above mentioned firefighting procedures and consider the hazards of other involved materials. The degree of risk is governed by the burning substance and the fire conditions. Do not allow runoff from firefighting to enter drains or water courses. Collect contaminated fire extinguisher water separately. Fire residues and contaminated fire extinguisher water must be disposed of in accordance with local regulations.
<b>General fire hazards</b>	May generate toxic or irritating combustion products. Sudden reaction and fire may result if product is mixed with an oxidizing agent.

## 6 ACCIDENTAL RELEASE MEASURES

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<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Cover spills with absorbent materials. Place in metal containers for recovery or disposal. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Shut off sources of ignition. Cover spills with absorbent material. Place in metal containers for recovery or disposal. Prevent entry into waterways, storm drains, and sewers.
<b>Environmental precautions</b>	Prevent entry into sewers, storm drains, and waterways.

## 7 HANDLING AND STORAGE

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<b>Precautions for safe handling</b>	Store in cool, well ventilated areas. Keep away from heat and open flames. Avoid prolonged inhalation of heated vapors or mists. Avoid prolonged skin contact. Use personal protective equipment. When using do not eat, drink or smoke.
<b>Conditions for safe storage, including any incompatibilities</b>	Avoid temperature extremes. Store away from excessive heat, from sources of ignition and from reactive materials.

## 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

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### Occupational exposure limits

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

Components	Type	Value	Form*
4,4'-Isopropylidiphenol-Epichlorohydrin Copolymer (CAS 025068-38-6)	TWA	NE	Hardened Form
Trimethylolethane Triglycidyl Ether (CAS 068460-21-9)	TWA	NE	Hardened Form
Titanium Dioxide (CAS 013463-67-7)	TWA	10 mg/m <sup>3</sup>	Hardened Form

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form*
4,4'-Isopropylidiphenol-Epichlorohydrin Copolymer (CAS 025068-38-6)	TWA	NE	Hardened Form
Trimethylolethane Triglycidyl Ether (CAS 068460-21-9)	TWA	NE	Hardened Form
Titanium Dioxide (CAS 013463-67-7)	TWA	10 mg/m <sup>3</sup>	Hardened Form

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form*
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\*Values meaningful only when harden product is abraded, ground.

<b>Biological limit values</b>	See Section 12.
<b>Exposure guidelines</b>	None required in adequately ventilated areas. If vapor concentration exceeds 20 ppm for longer than 15 minutes, a NIOSH approved respirator for organic vapors is recommended.
<b>Appropriate engineering controls</b>	No special controls needed. General and local exhaust recommended.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Splash proof goggles or chemical safety glasses.
<b>Skin protection</b>	
<b>Hand protection</b>	Wear appropriate chemical resistant nitrile rubber gloves.
<b>Other</b>	Wear long sleeved shirts and trousers. Emergency showers and eye wash stations should be readily accessible.
<b>Respiratory protection</b>	None required in adequately ventilated areas. If vapor concentration exceeds 20 ppm for longer than 15 minutes, a NIOSH approved respirator for organic vapors is recommended.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

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### Appearance

<b>Physical state</b>	Liquid
<b>Form</b>	Liquid
<b>Color</b>	White
<b>Odor</b>	Mild
<b>Odor threshold</b>	No data
<b>pH</b>	No data
<b>Melting point/freezing point</b>	No data
<b>Initial boiling point and boiling range</b>	>120°C (199°F)
<b>Flash point</b>	93°C (199°F) - TCC
<b>Evaporation rate</b>	<1 (Butyl Acetate = 1)
<b>Flammability (solid, gas)</b>	Not available

### Upper/lower flammability or explosive limits

<b>Flammability limit – lower (%)</b>	NE
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<b>Flammability limit – upper (%)</b>	NE
<b>Vapor pressure</b>	< 0.13 kPA @ 20°C (68°F)
<b>Vapor density</b>	No data
<b>Relative density</b>	1.1-1.2
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Insoluble
<b>Partition coefficient (n-octanol/water)</b>	No applicable information available
<b>Decomposition temperature</b>	No data
<b>Viscosity</b>	No data
<b>Other information</b>	
<b>Bulk density</b>	No data
<b>Partition coefficient (oil/water)</b>	3.242 @ 25°C estimated
<b>VOC (volume %)</b>	0%

## 10 STABILITY AND REACTIVITY

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<b>Reactivity</b>	The product is stable under normal conditions of use, storage, and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Not applicable (material is stable).
<b>Incompatible materials</b>	Oxidizing agents (perchlorates, nitrates), strong acids, hypochlorites, peroxides.
<b>Hazardous decomposition products</b>	
<b>Decomposition products</b>	Carbon dioxide, Carbon monoxide.
<b>Thermal decomposition</b>	No decomposition if stored and handled as prescribed/indicated.

## 11 TOXICOLOGICAL INFORMATION

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### Information on likely routes of exposure

<b>Inhalation</b>	Acute - At room temperature, exposure to vapor is minimal due to low volatility. Vapor from heated material, mist or aerosols may cause respiratory irritation. LC50 has not been determined.
<b>Skin contact</b>	Prolonged contact may cause skin irritation with local redness. Repeated contact may cause skin irritation with local redness. Has caused allergic skin reactions in humans.

<b>Eye contact</b>	May cause eye irritation. Corneal injury is unlikely.	
<b>Ingestion</b>	Acute – Low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.	
<b>Symptoms related to the physical, chemical, and toxicological characteristics</b>	See Symptoms above.	
<b>Information on toxicological effects</b>		
<b>Acute toxicity</b>	No data on the product itself.	
<b>Components</b>	<b>Species</b>	<b>Test Results</b>
Oral Toxicity	Rat	LD50: >15,000 mg/kg
Dermal Toxicity	Rabbit	LD50: 23,000 mg/kg
Inhalation Toxicity	ND	Not determined
<b>Skin corrosion/irritation</b>	Prolonged contact may cause skin irritation with local redness. Repeated contact may cause skin irritation with local redness. Has caused allergic skin reactions in humans.	
<b>Serious eye damage/eye irritation</b>	May cause eye irritation. Corneal injury is unlikely.	
<b>Respiratory or skin sensitization</b>		
<b>Respiratory sensitization</b>	No relevant data found.	
<b>Skin sensitization</b>	May cause an allergic reaction after a single exposure or with repeated or prolonged skin contact in humans. Has demonstrated the potential for contact allergy in mice.	
<b>Germ cell mutagenicity</b>	No relevant data found.	
<b>Carcinogenicity</b>	None	
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>	None	
<b>NTP Report on Carcinogens</b>	None	
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>	Not listed	
<b>Reproductive toxicity</b>	No	
<b>Specific target organ toxicity – single exposure</b>	Evaluation of available data suggests this material is not a stot-se toxicant.	
<b>Specific target organ toxicity – repeated exposure</b>	Except for skin sensitization repeated exposures to low molecular weight epoxy resins of this type are not anticipated to cause any significant adverse effects.	
<b>Aspiration hazard</b>	Due to the physical form of the product it is not an aspiration hazard.	

**Chronic effects** May cause skin disorders if contact is repeated or prolonged. Irritancy may happen if hardened product is abraded, ground, etc.

## 12 ECOLOGICAL INFORMATION

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<b>Ecotoxicity</b>	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.	
<b>Toxicity</b>		
<b>Aquatic Toxicity:</b>	See below.	
<b>Acute Toxicity to Fish</b>	Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/l in the most sensitive species tested)	
	LC50 (96 HRS): 2 mg/l	SPECIES: Oncorhynchus Mykiss (Rainbow Trout)
<b>Acute Toxicity to Aquatic Invertebrates</b>	EC50 (48 HRS): 1.8 mg/l	SPECIES: Daphnia Magna (Water Flea)
<b>Acute Toxicity to Aquatic Algae/Aquatic Plants</b>	EC50 (72 HRS): 11 mg/l	SPECIES: Scenedesmus Capricornutum (Fresh Water Algae)
<b>Toxicity to Bacteria</b>	EC50 (18 HR): Respiration Rates > 42.6 mg/l	SPECIES: Bacteria
<b>Chronic Aquatic Toxicity</b>		
<b>Chronic Toxicity to Aquatic Invertebrates</b>	MATC (maximum acceptable toxicant level), daphnia magna, semi static test, 21 d, number of offspring, 0.55 mg/l	
<b>Persistence and degradability</b>		
<b>Biodegradability</b>	Based on stringent OECD test guidelines, this material cannot be considered readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.	
<b>Biodegradation</b>	12%	
<b>Exposure Time</b>	28 days	
<b>Method</b>	OECD test guideline 302B or equivalent	
<b>Theoretical Oxygen Demand</b>	2.35 mg/mg estimated	
<b>Photo degradation</b>		
<b>Test Type</b>	Half life (Indirect Photolysis)	
<b>Sensitizer</b>	OH Radicals	
<b>Atmospheric Half Life</b>	1.92 HR	
<b>Method</b>	Estimated	
<b>Bioaccumulative potential</b>		
<b>Bioaccumulation</b>	Bioconcentration potential is moderate (BCF between 100 and 3000 or LOG P <sub>ow</sub> between 3 and 5)	
<b>Partition Coefficient: N-Octanol/ Water (Low P<sub>ow</sub>)</b>	3.242 @ 25°C estimated	



<b>Mobility in soil</b>	Potential for mobility in soil is low ( $K_{oc}$ between 500 and 2000). Given its very low Henry's Constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.
<b>Partition Coefficient (<math>K_{oc}</math>)</b>	1800-4400 estimated
<b>Other adverse effects</b>	No data available.

## 13 DISPOSAL CONSIDERATIONS

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<b>Disposal instructions</b>	Not a hazardous waste by RCRA criteria (40 CFR 261). Place in an appropriate disposal facility in compliance with all federal, state and local regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues/unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14 TRANSPORT INFORMATION

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<b>USDOT Hazard Class</b>	UN 3082 Environmentally hazardous substance, liquid N.O.S. (Epoxy Resin), 9, PG III
<b>UN Number</b>	9
<b>Packing Group</b>	UN3082
<b>IATA/ ICAO</b>	III
<b>IMDG</b>	UN 3082 Environmentally hazardous substance, liquid N.O.S. (Epoxy Resin), 9, PG III
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	UN 3082 Environmentally hazardous substance, liquid N.O.S. (Epoxy Resin), 9, PG III
<b>IMO SHIPPING DATA</b>	Not applicable
	UN 3082 Environmentally hazardous substance, liquid N.O.S. (Epoxy Resin), 9, PG III

## 15 REGULATORY INFORMATION

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<b>US federal regulations</b>	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
<b>TSCA (Toxic Substance Control Act)</b>	All components are listed in the TSCA chemical substance inventory

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed

**Superfund Amendments and Reauthorization Act of 1986 (SARA) Hazard categories**

**Sara Title III**

**Section 312 Hazard Class:** Immediate (Acute) health hazard, delayed (chronic) health hazard

**Section 313 Listed Ingredients:** None above de Minimus levels

**Other federal regulations**

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

Not regulated

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

Not regulated

**Safe Drinking Water Act (SDWA)**

Not regulated

**US state regulations**

**US. California Proposition 65**

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm: Titanium Dioxide (CAS 013463-67-7).

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

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

**16 OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF LAST REVISION**

<b>Issue date</b>	26 January 2017
<b>Revision date</b>	23 February 2017
<b>Version #</b>	01
<b>HMIS® ratings</b>	Health: 1 Flammability: 1 Reactivity: 2

**Disclaimer**

CTS Cement Manufacturing Corporation cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.



# Safety Data Sheet

## 1 IDENTIFICATION

<b>Product identifier</b>	<b>Rapid Set Fast Anchoring &amp; Repair Adhesive (Part B)</b>
<b>Other means of identification</b>	
<b>Product code</b>	<b>196031009</b>
<b>Recommended use</b>	Industrial use
<b>Recommended restrictions</b>	Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Company name</b>	CTS Cement Manufacturing Corporation
<b>Address</b>	11065 Knott Ave Suite A Cypress, CA 90630 United States
<b>Telephone</b>	1-800-929-3030
<b>E-mail</b>	<a href="mailto:info@ctscement.com">info@ctscement.com</a>
<b>Contact person</b>	Safety Officer
<b>Emergency telephone number</b>	1-800-929-3030 (8 AM - 5 PM)

## 2 HAZARDS IDENTIFICATION

<b>Physical hazards</b>	Not classified	
<b>Health Hazards</b>	Skin sensitization	Category 1B
	Skin corrosion	Category 1A
	Eye damage/eye irritation	Category 1
	Reproductive Toxicity	Category 2
	Acute Toxicity, Oral	Category 4
	Acute Toxicity, Dermal	Category 4
	Carcinogenicity	Category 1
<b>OSHA defined hazards</b>	Not classified	

### Label elements

**Pictogram(s):**



**Signal Word**

Danger

<b>Hazard statement</b>	H302+H312: Harmful in contact with skin or if swallowed H314: Causes severe skin burns and eye damage H317: May cause an allergic skin reaction H335: May cause respiratory tract irritation H350: May cause cancer H361: Suspected of damaging fertility or the unborn child H362: May cause harm to breast-fed children
<b>Precautionary statement</b>	
<b>Prevention</b>	P201: Obtain special instructions before use P202: Do not handle until all safety precautions have been read and understood P261: Do not breathe dust/fume/gas/mist/vapors/spray P263: Avoid contact during pregnancy/while nursing P264: Wash skin thoroughly after handling P270: Do not eat, drink or smoke when using this product P272: Contaminated clothing should not be allowed out of the workplace P273: Avoid release to environment P280: Wear protective gloves/protective clothing/eye protection/face protection
<b>Response</b>	P308+P313: If exposed or concerned: Get medical advice/attention. P303+P353+P361: If on skin or hair: Wash with plenty of water. Take off contaminated clothing and wash before reuse. P305+P351+P338: If in eyes: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so, continue rinsing. P304+P340 If inhaled: remove person to fresh air and keep comfortable for breathing P301+P331: If swallowed: rinse mouth. Do not induce vomiting P337+P313: If eye irritation persists: get medical advice/attention. P361+P364: Take off contaminated clothing and wash before reuse.
<b>Storage</b>	P405: Store locked up.
<b>Disposal</b>	P501: Dispose of contents/container in accordance with local/regional/national /international regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.

### 3 COMPOSITIONS/INFORMATION ON INGREDIENTS

#### Mixtures

Chemical name	CAS number	Concentration
Crystalline Silica	14808-60-7	40 – 70
Nonylphenol	025154-52-3	15 – 30
Aminoethylpeperazine	000140-31-8	15 – 30
Carbon Black	001333-86-4	0.1 – 1.0

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## 4 FIRST-AID MEASURES

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<b>Inhalation</b>	Remove the affected person immediately to fresh air. If breathing becomes worse, seek medical attention. Give assisted respiration if breathing has stopped or is labored (Call a physician).
<b>Skin contact</b>	Remove product and flush affected area with water for 15 minutes. If irritation persists get medical attention.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
<b>Ingestion</b>	Immediately rinse mouth and drink 3-4 glasses of milk or water if person conscious. Do not induce vomiting. Seek medical attention, care and treatment.
<b>Most important symptoms/effects, acute and delayed</b>	Remove affected person from area. Treat symptomatically.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

## 5 FIRE-FIGHTING MEASURES

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<b>Suitable extinguishing media</b>	Water fog, dry chemical powder, carbon dioxide (CO <sub>2</sub> ), alcohol foam.
<b>Unsuitable extinguishing media</b>	Not determined.
<b>Specific hazards arising from the chemical</b>	Carbon monoxide, carbon dioxide, NH <sub>3</sub> , nitrogen oxides can be produced if heated, burned or reacted with incompatible materials. Nitrogen oxides can react with water vapors to form corrosive nitric acid.
<b>Special protective equipment</b>	None likely with small quantities. For large quantities, firefighters and others exposed to vapors or products of combustion should wear butyl rubber boots, gloves, and body suit. Self-contained breathing apparatus should be worn.
<b>OSHA Class</b>	IIIB
<b>Firefighting equipment/instructions</b>	Firefighters and others exposed to vapors or products of combustion should wear butyl rubber boots, gloves, and body suit. Self-contained breathing apparatus should be worn.
<b>Specific methods</b>	Use above mentioned firefighting procedures and consider the hazards of other involved materials. The degree of risk is governed by the burning substance and the fire conditions. Do not allow runoff from firefighting to enter drains or water courses. Collect contaminated fire extinguisher water separately. Fire residues and contaminated fire extinguisher water must be disposed of in accordance with local regulations.

**General fire hazards**

May generate toxic or irritating combustion products. Sudden reaction and fire may result if product is mixed with an oxidizing agent.

## 6 ACCIDENTAL RELEASE MEASURES

---

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

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Cover spills with absorbent materials. Place in metal containers for recovery or disposal. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see Section 8 of the SDS.

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

Shut off sources of ignition. Cover spills with absorbent material. Place in metal containers for recovery or disposal. Prevent entry into waterways, storm drains, and sewers.

**Environmental precautions**

Prevent entry into sewers, storm drains, and waterways.

## 7 HANDLING AND STORAGE

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**Precautions for safe handling**

Avoid contact with skin and eyes. Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations. Use personal protective equipment. When using do not eat, drink or smoke.

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

Keep away from oxidizers, heat or flame. Store in steel containers. Do not store near acids. Keep containers tightly closed in a dry, cool, and well-ventilated place.

## 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

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**Occupational exposure limits****US. OSHA Table Z-3 (29 CFR 1910.1000)**

Components	Type	Value	Form*
Crystalline Silica (CAS 14808-60-7)	TWA	0.1 mg/m <sup>3</sup>	Hardened Form
Nonylphenol (CAS 025154-52-3)	TWA	NE	Hardened Form
Aminoethylpiperazine (CAS 000140-31-8)	TWA	NE	Hardened Form
Carbon Black (CAS 001333-86-4)	TWA	3.5 mg/m <sup>3</sup>	Hardened Form

**US. ACGIH Threshold Limit Values**

Components	Type	Value	Form*
Crystalline Silica (CAS 14808-60-7)	TWA	0.05 mg/m <sup>3</sup>	Hardened Form
Nonylphenol (CAS 025154-52-3)	TWA	NE	Hardened Form
Aminoethylpiperazine (CAS 000140-31-8)	TWA	NE	Hardened Form
Carbon Black (CAS 001333-86-4)	TWA	3.5 mg/m <sup>3</sup>	Hardened Form

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value	Form*
Crystalline Silica (CAS 14808-60-7)	TWA	0.05 mg/m <sup>3</sup>	Hardened Form

\*Values meaningful only when harden product is abraded, ground.

<b>Biological limit values</b>	See Section 12.
<b>Exposure guidelines</b>	None required in adequately ventilated areas. If vapor concentration exceeds 20 ppm for longer than 15 minutes, a NIOSH approved respirator for organic vapors is recommended.
<b>Appropriate engineering controls</b>	No special controls needed. General and local exhaust recommended.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Splash proof goggles or chemical safety glasses.
<b>Skin protection</b>	
<b>Hand protection</b>	Wear appropriate chemical resistant nitrile rubber gloves.
<b>Other</b>	Wear long sleeved shirts and trousers. Emergency showers and eye wash stations should be readily accessible.
<b>Respiratory protection</b>	None required in adequately ventilated areas. If vapor concentration exceeds 20 ppm for longer than 15 minutes, a NIOSH approved respirator for organic vapors is recommended.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

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<b>Appearance</b>	
<b>Physical state</b>	Liquid
<b>Form</b>	Liquid
<b>Color</b>	Black
<b>Odor</b>	Ammoniacal
<b>Odor threshold</b>	No data
<b>pH</b>	No data
<b>Melting point/freezing point</b>	0°C (32°F)
<b>Initial boiling point and boiling range</b>	260°C (500°F)
<b>Flash point</b>	121°C (250°F) - PMCC
<b>Evaporation rate</b>	No data
<b>Flammability (solid, gas)</b>	Not available
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit – lower (%)</b>	NE
<b>Flammability limit – upper (%)</b>	NE



<b>Vapor pressure</b>	No data
<b>Vapor density</b>	No data
<b>Relative density</b>	1.3-1.4
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	<1%
<b>Partition coefficient (n-octanol/water)</b>	No applicable information available
<b>Decomposition temperature</b>	No data
<b>Viscosity</b>	No data
<b>Other information</b>	
<b>Bulk density</b>	No data
<b>Partition coefficient (oil/water)</b>	Not applicable
<b>VOC (weight %)</b>	0%

## 10 STABILITY AND REACTIVITY

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<b>Reactivity</b>	The product is stable under normal conditions of use, storage, and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Avoid elevated temperatures.
<b>Incompatible materials</b>	Oxidizing agents (peroxides, nitrates), acids.
<b>Hazardous decomposition products</b>	
<b>Decomposition products</b>	None known.
<b>Thermal decomposition</b>	No decomposition if stored and handled as prescribed/indicated.

## 11 TOXICOLOGICAL INFORMATION

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### Information on likely routes of exposure

<b>Inhalation</b>	Acute – Vapors may cause damage to contacted tissue and produce scarring. Chronic – Repeated and/or prolonged exposures can cause tightness of chest, shortness of breath and cough.
<b>Skin contact</b>	Acute – Undiluted product quickly causes irritation. May cause chemical burns. Chronic – May cause allergic reaction/sensitization, defatting of skin, rash, and irritation.
<b>Eye contact</b>	Acute – Severe irritant. May cause burns. Vapor may cause lacrimation and reversible corneal edema. Chronic – Conjunctivitis or corneal damage.

**Ingestion** Acute – May cause irritation and bleeding of the gastrointestinal tract.  
Chronic – Scarring of the affected tissues may occur.

**Symptoms related to the physical, chemical, and toxicological characteristics** See Symptoms above.

**Information on toxicological effects**

**Acute toxicity** No data on the product itself.

Components	Species	Test Results
Nonylphenol (Oral)	Rat	LD50: 1604 mg/kg
Aminoethyl Piperazine (Oral)	Rat	LD50: 2140 mg/kg
Nonylphenol (Dermal)	Rat	LD50: 2031 mg/kg
Aminoethyl Piperazine (Dermal)	Rabbit	LD50: 866 mg/kg

**Skin corrosion/irritation** DOT Skin Corrosion Study: Corrosive in all rabbits at 3 minutes of exposure.

**Serious eye damage/eye irritation** Severe eye irritation.

**Respiratory or skin sensitization**

**Respiratory sensitization** Not classified but possible due to skin sensitization effect.

**Skin sensitization** May cause an allergic reaction after a single exposure or with repeated or prolonged skin contact.

**Germ cell mutagenicity** Animal testing on this substance indicate possible mutagen; tests on bacterial and mammalian cell cultures did not show mutagenic effects.

**Carcinogenicity** May cause cancer.  
In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003) According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled.

**IARC Monographs. Overall Evaluation of Carcinogenicity** Crystalline Silica (CAS 14808-60-7) 1A Carcinogenic to humans.

<b>NTP Report on Carcinogens</b>	Crystalline Silica (CAS 14808-60-7)	Known To Be Human Carcinogen.
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>	Not listed	
<b>Reproductive toxicity</b>	Suspected of damaging fertility or the unborn child. Avoid exposure to woman during early pregnancy.	
<b>Specific target organ toxicity – single exposure</b>	No data.	
<b>Specific target organ toxicity – repeated exposure</b>	No data.	
<b>Aspiration hazard</b>	Due to the physical form of the product it is not an aspiration hazard.	
<b>Chronic effects</b>	Prolonged or repeated exposure may cause lung injury and may result in delayed lung disease (silicosis). May cause skin disorders if contact is repeated or prolonged. Irritancy may happen if hardened product is abraded, ground, etc.	

## 12 ECOLOGICAL INFORMATION

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<b>Ecotoxicity</b>	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
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**Toxicity****Aquatic Toxicity:** No data on the product itself**Acute Toxicity to Fish-Components**

Nonylphenol	LC50 (96 HRS): 0.14 mg/l	SPECIES: Fathead Minnow
Aminoethyl Piperazine	LC50 (96 HRS): 2190 mg/l	SPECIES: Fathead Minnow

**Acute Toxicity to Aquatic Invertebrates: Components**

Polyoxypropylenediamine	EC50 (48 HRS): 80 mg/l	SPECIES: Daphnia Magna
Nonylphenol	EC50 (48 HRS): 0.035 mg/l	SPECIES: Daphnia Magna
Aminoethyl Piperazine	EC50 (48 HRS): 58 mg/l	SPECIES: Daphnia Magna

**Acute Toxicity to Aquatic Algae/Aquatic Plants: Components**

Polyoxypropylenediamine	EC50 (72 HRS): 15 mg/l	SPECIES: Fresh Water Algae
Nonylphenol	LC50 (72 HRS): 0.056 mg/l	SPECIES: Fresh Water Algae
Aminoethyl Piperazine	EC50 (72 HRS): >1000 mg/l	SPECIES: Fresh Water Algae

**Toxicity to Bacteria:****Components**

Polyoxypropylenediamine	EC50: 310 mg/l	Activated Sludge
Nonylphenol	EC50: 950 mg/l	Activated Sludge

**Chronic Aquatic Toxicity** No data available.**Persistence and degradability****Biodegradability**

Based on stringent OECD test guidelines, this material cannot be considered readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

**Biodegradation**

29%

**Exposure Time**

28 days

**Method**

OECD test guideline 301B or equivalent

**Bioaccumulative potential****Bioaccumulation**

Bioconcentration potential is moderate (BCF between 100 and 3000 or LOG  $P_{ow}$  between 3 and 5)

**Partition Coefficient: N-Octanol/ Water (Low  $P_{ow}$ )**

3.16 @ 21.5°C estimated

**Mobility in soil**

Product is soluble in water.

**Partition Coefficient ( $K_{oc}$ )**

1.473 estimated

**Other adverse effects**

No data available.

## 13 DISPOSAL CONSIDERATIONS

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<b>Disposal instructions</b>	Incineration is preferred. Dispose of contents/container in accordance with local/regional/national/ international regulations. Do not discharge into drains/surface waters/ groundwater. This product should not be allowed to enter drains, water courses, or the soil.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues/unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14 TRANSPORT INFORMATION

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<b>USDOT</b>	BULK: Amines, liquid, corrosive, N.O.S (Aminoethylpiperazine, Nonyl Phenol) CARTRIDGE: Limited Quantity, LTD. QTY
<b>Hazard Class</b>	8
<b>UN Number</b>	UN 2735
<b>Packing Group</b>	III
<b>IATA</b>	BULK/CARTRIDGE: UN2735, Amines, Liquid, corrosive N.O.S (Aminoethylpiperazine, Nonyl Phenol), 8, PG III
<b>IMDG</b>	BULK/CARTRIDGE: UN2735, Amines, Liquid, corrosive N.O.S (Aminoethylpiperazine, Nonyl Phenol), 8, PG III
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable
<b>IMO SHIPPING DATA</b>	BULK/CARTRIDGE: UN2735, Amines, Liquid, corrosive N.O.S (Aminoethylpiperazine, Nonyl Phenol), 8, PG III

## 15 REGULATORY INFORMATION

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<b>US federal regulations</b>	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
<b>TSCA (Toxic Substance Control Act)</b>	All components are listed in the TSCA chemical substance inventory
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>	Not listed
<b>CERCLA Hazardous Substance List (40 CFR 302.4)</b>	Not listed

**Superfund Amendments and Reauthorization Act of 1986 (SARA) Hazard categories**

**Sara Title III**

**Section 312 Hazard Class:** Immediate (Acute) health hazard, delayed (chronic) health hazard

**Section 313 Listed Ingredients:** Phenol

**Other federal regulations**

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

Not regulated

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

Not regulated

**Safe Drinking Water Act (SDWA)**

Not regulated

**US state regulations**

**US. Massachusetts RTK – Substance List**

<b>Chemical name</b>	<b>CAS number</b>	<b>Concentration</b>
Crystalline Silica	14808-60-7	40 - 70

**US. New Jersey Worker and Community Right-to-Know Act**

<b>Chemical name</b>	<b>CAS number</b>	<b>Concentration</b>
Crystalline Silica	14808-60-7	40 - 70

**US. Pennsylvania Worker and Community Right-to-Know Law**

<b>Chemical name</b>	<b>CAS number</b>	<b>Concentration</b>
Crystalline Silica	14808-60-7	40 - 70

**US. Rhode Island RTK**

<b>Chemical name</b>	<b>CAS number</b>	<b>Concentration</b>
Crystalline Silica	14808-60-7	40 - 70

**US. California Proposition 65**

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

**International Inventories**

<b>Country(s) or region</b>	<b>Inventory name</b>	<b>On inventory (yes/no)*</b>
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

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

## 16 OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF LAST REVISION

<b>Issue date</b>	26 January 2017
<b>Revision date</b>	27 February 2017
<b>Version #</b>	01

Rapid Set Fast Anchoring & Repair Adhesive Part B

SDS US

Version #: 01

Revision date: 27 February 2017 | Issue date: 25 January 2017

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**HMIS® ratings**

Health: 2  
Flammability: 1  
Reactivity: 1

**Disclaimer**

CTS Cement Manufacturing Corporation cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.