



## Section 1: Identification of the Substance/Mixture and of the Company Undertaking

### Product identifier used on the label:

**Product Name:** Structural Adhesive - Urethane (1 minute)

### Other means of identification:

**Product Codes:** 63642504615

### Recommended use of the chemical and restrictions on use:

**Product Uses:** Adhesives  
Industrial chemical

### Chemical manufacturer address and telephone number:

**Manufacturer Name:** Saint-Gobain Abrasives, Inc.

**Manufacturer Address 1:** 1 New Bond Street

**Manufacturer City:** Worcester

**Manufacturer State:** MA

**Manufacturer Zip Code:** 01615

**Manufacturer Country:** USA

**Manufacturer Web:** [www.Nortonabrasives.com](http://www.Nortonabrasives.com)

**Business Phone:** 508-795-5000

**Distributor:** Saint-Gobain Canada, Inc.

**Distributor Address 1:** 28 Albert St, W.

**Distributor City:** Columbus

**Distributor State:** ON

**Distributor ZipCode:** N0J 1S0

**Distributor Country:** Canada

**Distributor Web:** [www.Nortonabrasives.com](http://www.Nortonabrasives.com)

### Emergency phone number:

**Emergency Phone:** 508-795-5000

**Revision Date:** 2019-01-25 18:33:00

**Notes from Section 1:** CHEMTREC:  
For emergencies in the US, call CHEMTREC: 800-424-9300  
For emergencies in Canada, call CHEMTREC: 800-424-9300

140331  
29 CFR 1910.1200 (OSHA HazCom 2012)

## Section 2: Hazards Identification

### Classification of the chemical in accordance with CFR 1910.1200(d)(f):



**Signal Words:** Danger

**Product:**

**GHS Class:**

**GHS Classification**

Acute toxicity (Inhalation) : Category 4  
 Skin irritation : Category 2  
 Eye irritation : Category 2A  
 Respiratory sensitization : Category 1  
 Skin sensitization : Category 1  
 Reproductive toxicity : Category 2  
 Specific target organ systemic toxicity - single exposure : Category 3 (Respiratory system)  
 Specific target organ systemic toxicity - repeated exposure (Inhalation) : Category 2 (Respiratory system, Respiratory Tract)

**Hazard Statements:**

H315 - Causes skin irritation.  
 H317 - May cause an allergic skin reaction.  
 H319 - Causes serious eye irritation.  
 H332 - Harmful if inhaled.  
 H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 H335 - May cause respiratory irritation.  
 H361 - Suspected of damaging fertility or the unborn child .  
 H373 - May cause damage to organs (Respiratory system, Respiratory Tract) through prolonged or repeated exposure if inhaled.

**Precautionary Statements:**

P201 - Obtain special instructions before use.  
 P202 - Do not handle until all safety precautions have been read and understood.  
 P260 - Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.  
 P264 - Wash skin thoroughly after handling.  
 P271 - Use only outdoors or in a well-ventilated area.  
 P272 - Contaminated work clothing should not be allowed out of the workplace.  
 P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection.  
 P285 - In case of inadequate ventilation wear respiratory protection.  
 P302+P352 - IF ON SKIN: Wash with plenty of soap and water.  
 P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P312 - Call a POISON CENTER/doctor if you feel unwell.  
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P308+P313 - IF exposed or concerned: Get medical advice/ attention.  
 P333+P313 - If skin irritation or rash occurs: Get medical advice/ attention.  
 P337+P313 - If eye irritation persists: Get medical advice/ attention.  
 P362 - Take off contaminated clothing and wash before reuse.  
 P403 - Store in a well-ventilated place.  
 P233 - Keep container tightly closed.  
 P405 - Store locked up.  
 P501 - Dispose of contents/ container to an approved waste disposal plant.

**Hazards not otherwise classified that have been identified during the classification process:**

### Section 3: Composition/Information on Ingredients

**Mixtures:**

Ingredient Name	CAS Number	Ingredient Percent	EC Number	Comments
PART A : POLYMER	254504001-5759	Concentration (%) : >= 10.00 - < 15.00		
PART A : ALUMINUM SILICATES	254504001-5709	Concentration (%) : >= 10.00 - < 15.00		

PART A : URETHANE PREPOLYMER	800986-5572P	Concentration (%) : >= 5.00 - < 10.00		
PART A : 4,4'-DIPHENYLMETHANE DIISOCYANATE	101-68-8	Concentration (%) : 35.5153		
PART A : TALC	14807-96-6	Concentration (%) : 10.224		
PART A : PROPYLENE CARBONATE	108-32-7	Concentration (%) : 1.4964		
PART B : TALC	14807-96-6	Concentration (%) : 24.21		
PART B : PIPERAZINE	110-85-0	Concentration (%) : 0.76		

**Product:****Comments:**

PART A

Substance / Mixture : Mixture

The identity and concentration of one or more component(s) is being withheld under business confidentiality.

**PART A : POLYMER:****Comments:**

Classification

Acute Tox. 4; H332

Skin Irrit. 2; H315

Eye Irrit. 2A; H319

Resp. Sens. 1A; H334

Skin Sens. 1A; H317

STOT SE 3; H335

STOT RE 2; H373

**PART A : ALUMINUM SILICATES:****Comments:**

Classification

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

**PART A : 4,4'-DIPHENYLMETHANE DIISOCYANATE:****Comments:**

Classification

Comb Dust

Acute Tox. 4; H332

Skin Irrit. 2; H315

Eye Irrit. 2A; H319

Resp. Sens. 1; H334

Skin Sens. 1; H317

STOT SE 3; H335

STOT RE 2; H373

**PART A : URETHANE PREPOLYMER:****Comments:**

Classification

Resp. Sens. 1; H334

Skin Sens. 1; H317

**PART A : PROPYLENE CARBONATE:****Comments:**

Classification

Eye Irrit. 2A; H319

**PART A : TALC:****Comments:**

Classification

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

**PART B : PIPERAZINE:**

**Comments:**

Classification  
 Flam. Sol. 1; H228  
 Skin Corr. 1B; H314  
 Eye Dam. 1; H318  
 Resp. Sens. 1B; H334  
 Skin Sens. 1B; H317  
 Repr. 2; H361

**PART B : TALC:****Comments:**

Classification  
 This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

## Section 4: First Aid Measures

**Description of necessary measures:****Eye Contact:**

Immediately flush eye(s) with plenty of water.  
 Remove contact lenses.  
 Protect unharmed eye.

**Skin Contact:**

Remove contaminated clothing. If irritation develops, get medical attention.  
 If on skin, rinse well with water.  
 Wash contaminated clothing before re-use.

**Inhalation:**

Move to fresh air.  
 Call a physician or poison control centre immediately.  
 Keep patient warm and at rest.  
 If unconscious, place in recovery position and seek medical advice.

**Ingestion:**

If swallowed : Obtain medical attention.  
 Do not give milk or alcoholic beverages.  
 Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

**Most important symptoms/effects, acute and delayed:****Indication of immediate medical attention and special treatment needed****Note To Physicians:**

No hazards which require special first aid measures.

**Notes from Section 4:**

General advice : Move out of dangerous area.  
 Call a POISON CENTRE or doctor/physician if exposed or you feel unwell.  
 Show this safety data sheet to the doctor in attendance.  
 Do not leave the victim unattended.  
 Most important symptoms and effects, both acute and delayed: Pulmonary edema may be delayed.  
 Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:  
 stomach or intestinal upset (nausea, vomiting, diarrhea)  
 irritation (nose, throat, airways)  
 Cough  
 Headache  
 chest pain  
 lung edema (fluid buildup in the lung tissue)  
 Difficulty in breathing  
 Causes skin irritation.  
 May cause an allergic skin reaction.  
 Causes serious eye irritation.  
 Harmful if inhaled.  
 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 May cause respiratory irritation.  
 Suspected of damaging fertility or the unborn child.

## Section 5: Firefighting Measures

### Suitable and unsuitable extinguishing media

**Extinguishing Media:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
 Water spray  
 Foam  
 Carbon dioxide (CO<sub>2</sub>)  
 Dry chemical

**Unsuitable Media:** High volume water jet

### Specific hazards arising from the chemical

**Hazardous Combustion Products:** carbon dioxide and carbon monoxide  
 Hydrogen cyanide (hydrocyanic acid)  
 Isocyanates  
 Nitrogen oxides (NO<sub>x</sub>)  
 toxic fumes  
 Aldehydes  
 Ketones  
 halogenated hydrocarbons  
 nitrogen oxides (NO<sub>x</sub>)  
 Bromine  
 Hydrocarbons

### Special protective equipment and precautions for fire-fighters

**Fire Fighting Instructions:** Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

**Fire Fighting Equipment:** Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

**NFPA Health:** 2

**NFPA Fire:** 1

**NFPA Reactivity:** 0

**Notes from Section 5:** Specific extinguishing methods : Product is compatible with standard fire-fighting agents.  
 Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

## Section 6: Accidental Release Measures

### Personal precautions, protective equipment and emergency procedures

**Personnel Precautions:** Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
 Ensure adequate ventilation.  
 Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

### Methods and materials for containment and cleaning up

**Methods for Containment:** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
 Keep in suitable, closed containers for disposal.

**Methods for Cleanup:** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
 Keep in suitable, closed containers for disposal.

### Environmental precautions

<b>Environmental Precautions:</b>	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
<b>Notes from Section 6:</b>	Other information : Comply with all applicable federal, state, and local regulations.

## Section 7: Handling and Storage

### Precautions for safe handling

<b>Handling:</b>	Advice on safe handling : Avoid formation of aerosol. Provide sufficient air exchange and/or exhaust in work rooms. Do not breathe vapours/dust. Do not smoke. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. Container hazardous when empty. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. Smoking, eating and drinking should be prohibited in the application area. For personal protection see section 8. Dispose of rinse water in accordance with local and national regulations.
<b>Hygiene Practices:</b>	Hygiene measures : Wash hands before breaks and at the end of workday. When using do not eat or drink. When using do not smoke.

### Conditions for safe storage, including any incompatibilities

<b>Storage:</b>	Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.
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## Section 8: Exposure Controls/Personal Protection

### Exposure Guidelines

#### Exposure Guidelines - Ingredient Based:

##### PART A : TALC:

<b>TWA:</b>	20 Million particles per cubic foot Dust OSHA Z-3
<b>TWA:</b>	2 mg/m3 respirable dust fraction OSHA P0
<b>TWA:</b>	2 mg/m3 respirable dust fraction OSHA P0
<b>PEL:</b>	2 mg/m3 Respirable dust CAL PEL
<b>TWA:</b>	0.1 fibres per cubic centimeter ACGIH
<b>TWA:</b>	2 mg/m3 Respirable fraction ACGIH

##### PART B : TALC:

<b>TWA:</b>	20 Million particles per cubic foot Dust OSHA Z-3
<b>TWA:</b>	2 mg/m3 respirable dust fraction OSHA P0
<b>TWA:</b>	2 mg/m3 Respirable NIOSH REL
<b>PEL:</b>	2 mg/m3 Respirable dust CAL PEL

<b>TWA:</b>	0.1 fibres per cubic centimeter ACGIH
<b>TWA:</b>	2 mg/m <sup>3</sup> Respirable fraction ACGIH
<b>PART B : PIPERAZINE:</b>	
<b>TWA:</b>	0.03 ppm Inhalable fraction ACGIH and vapor (piperazine)

### Appropriate engineering controls

<b>Engineering Controls:</b>	Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.
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### Individual protection measures

<b>Eye Protection:</b>	Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.
<b>Skin Protection:</b>	Skin and body protection : Wear as appropriate: Impervious clothing Safety shoes Choose body protection according to the amount and concentration of the dangerous substance at the work place. Discard gloves that show tears, pinholes, or signs of wear. Wear resistant gloves (consult your safety equipment supplier).
<b>Hand Protection:</b>	Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
<b>Respiratory Protection:</b>	In the case of vapour formation use a respirator with an approved filter. Diisocyanates have poor warning properties. An air-purifying respirator with an organic vapor cartridge and an N95 prefilter can be used safely and effectively to reduce exposure, provided that appropriate cartridge change schedules are developed to ensure that cartridges are changed before breakthrough occurs. The employer is required to select the appropriate respirator for each situation and must consider potential exposure to chemicals in addition to diisocyanates.
<b>Hygiene Practices:</b>	Hygiene measures : Wash hands before breaks and at the end of workday. When using do not eat or drink. When using do not smoke.
<b>Notes from Section 8:</b>	The identity and concentration of one or more component(s) is being withheld under business confidentiality.

## Section 9: Physical and Chemical Properties

### Physical and chemical properties

<b>Physical State:</b>	PART A:liquid <b>Appearance</b> : viscous PART B:liquid
<b>Color:</b>	PART A:beige PART B:black
<b>Odor:</b>	PART A:No data available PART B:No data available
<b>pH:</b>	PART A:No data available PART B:No data available
<b>Melting Temperature:</b>	PART A:No data available PART B:No data available
<b>Boiling Temperature:</b>	PART A:> 392 °F / > 200 °C PART B:
<b>Flash Point:</b>	PART A:> 100 °C PART B:> 93.4 °C

<b>Flash Point Method:</b>	Seta closed cup
<b>Ignition Temperature:</b>	PART A :No data available PART B :No data available
<b>Lower Flammable Limit:</b>	PART A :No data available PART B :No data available
<b>Upper Flammable Limit:</b>	PART A :No data available PART B :No data available
<b>Decomposition Temperature:</b>	PART A:Thermal decomposition : No data availableV PART B:Thermal decomposition : No data available
<b>Vapor Pressure:</b>	PART A:< 0.01333 hPa (25 °C) PART B:3 hPa (25 °C) Calculated Vapor Pressure
<b>Vapor Density:</b>	PART A:Relative vapour density : > 1(Air = 1.0) PART B:Relative vapour density : No data available
<b>Freezing Temperature:</b>	PART A:No data available PART B:No data available
<b>Density:</b>	PART A:1.288 g/cm <sup>3</sup> (20 °C) Relative density : No data available PART B:1.225 g/cm <sup>3</sup> (77.00 °F) Relative density : 1.225 (77.00 °F)
<b>Solubility:</b>	PART A:Solubility in other solvents : No data available PART B:Solubility in other solvents : No data available
<b>Solubility In Water:</b>	PART A:practically insoluble PART B:No data available
<b>Evaporation Rate:</b>	PART A:< 1 n-Butyl Acetate = 1 PART B:No data available
<b>Viscosity:</b>	PART A:Viscosity, kinematic : No data available PART B:Viscosity, kinematic : No data available
<b>Odor Threshold:</b>	PART A:No data available PART B:No data available
<b>Octanol Water Partition Coef:</b>	PART A:No data available PART B:No data available
<b>Dynamic Viscosity:</b>	ca. 20,000 mPa.s PART B:20,000 mPa.s
<b>Oxidizing Properties:</b>	PART A:No data available PART B:No data available

## Section 10: Stability and Reactivity

### Reactivity:

<b>Reactivity:</b>	No decomposition if stored and applied as directed. Possibility of hazardous reactions : Product will not undergo hazardous polymerization.
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### Chemical Stability:

<b>Chemical Stability:</b>	Stable under recommended storage conditions.
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### Possibility of hazardous reactions:

#### Conditions To Avoid:

<b>Conditions To Avoid:</b>	heat Freezing temperatures. Exposure to moisture
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**Incompatible Materials:**

**Incompatible Materials:**

- Acids
- Alcohols
- aluminum
- Amines
- Ammonia
- Bases
- Copper alloys
- fluorides
- Iron
- isocyanates
- Oxidizing agents
- oxidizers
- Phosphorus compounds
- strong alkalis
- strong reducing agents
- water
- Zinc
- Humid air

**Hazardous Decomposition Products:**

- carbon dioxide and carbon monoxide
- Hydrocarbons
- Hydrogen cyanide (hydrocyanic acid)
- Isocyanates
- Nitrogen oxides (NO<sub>x</sub>)

## Section 11: Toxicological Information

**Toxicological Information:****Product:**

**Acute Toxicity:** Harmful if inhaled.

**Route of Exposure:** Information on likely routes of exposure: Inhalation  
Skin contact  
Eye Contact  
Ingestion

**Carcinogenicity:** Not classified based on available information.  
Carcinogenicity - Assessment : Methylene bisphenylisocyanate (MDI) aerosol has been reported to be irritating to lungs at a concentration of 1 mg/m<sup>3</sup> with no effect observed at 0.2 mg/m<sup>3</sup>. Although MDI has been reported to cause an increase in non-carcinogenic lung tumors and a single carcinogenic lung tumor at very high concentrations (6 mg/m<sup>3</sup>), it is not classified as a carcinogen by IARC, NTP or OSHA.

**Mutagenicity:** Not classified based on available information.

**Reproductive Toxicity:** Suspected of damaging fertility or the unborn child.

**Irritation:** Skin corrosion/irritation  
Causes skin irritation.  
Product:  
Remarks: May cause skin irritation and/or dermatitis.

Serious eye damage/eye irritation  
Causes serious eye irritation.  
Product:  
Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin., Causes serious eye irritation.

**Sensitization:** Skin sensitisation: May cause an allergic skin reaction.  
Respiratory sensitisation: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

<b>OSHA Carcinogen:</b>	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
<b>IARC Carcinogen:</b>	Group 2B: Possibly carcinogenic to humans CARBON BLACK 1333-86-4
<b>NTP Carcinogen:</b>	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
<b>Notes from Section 11:</b>	Further information Product: Remarks: No data available

**PART A : POLYMER:**

<b>Skin Toxicity:</b>	(Rabbit): > 9,400 mg/kg Remarks: Information given is based on data obtained from similar substances.
<b>Ingestion Toxicity:</b>	LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 425 GLP: yes
<b>Inhalation Toxicity:</b>	Assessment: The component/mixture is classified as acute inhalation toxicity, category 4.
<b>Mutagenicity:</b>	Genotoxicity in vitro : Test Type: Ames test Result: negative Remarks: Information given is based on data obtained from similar substances.  Genotoxicity in vivo : Test Type: In vivo micronucleus test Test species: Rat Method: OECD Test Guideline 474 Remarks: Information given is based on data obtained from similar substances.
<b>Irritation:</b>	Skin corrosion/irritation Result: Irritating to skin. Remarks: Information given is based on data obtained from similar substances.  Serious eye damage/eye irritation Result: No eye irritation Remarks: Information given is based on data obtained from similar substances. Result: Irritating to eyes.
<b>Sensitization:</b>	Test Type: Maximisation Test Species: Guinea pig Assessment: May cause sensitisation by skin contact. Result: The product is a skin sensitiser, sub-category 1A. Assessment: May cause sensitization by inhalation. Result: The product is a respiratory sensitiser, sub-category 1A.

**PART A : 4,4'-DIPHENYLMETHANE DIISOCYANATE:**

<b>Skin Toxicity:</b>	LD50 (Rabbit): > 7,900 mg/kg
<b>Ingestion Toxicity:</b>	LD50 (Rat): 9,200 mg/kg

**Inhalation Toxicity:** LC50 (Rat): 0.369 mg/l  
 Exposure time: 4 h  
 LC50 (Rat): > 2.24 mg/l  
 Exposure time: 1 h  
 Test atmosphere: dust/mist  
 Method: OECD Test Guideline 403  
 Assessment: The component/mixture is classified as acute inhalation toxicity, category 4.

**Irritation:** Skin corrosion/irritation  
 Result: Irritating to skin.

Serious eye damage/eye irritation  
 Result: Irritating to eyes.

**Sensitization:** Assessment: May cause sensitisation by inhalation.  
 Assessment: May cause sensitisation by skin contact.

#### **PART A : ALUMINUM SILICATES:**

**Irritation:** Skin corrosion/irritation  
 Result: Slight, transient irritation

Serious eye damage/eye irritation  
 Result: Slight, transient irritation

#### **PART A : URETHANE PREPOLYMER:**

**Irritation:** Skin corrosion/irritation  
 Result: No skin irritation

Serious eye damage/eye irritation  
 Result: No eye irritation

**Sensitization:** Assessment: May cause sensitisation by skin contact.  
 Assessment: May cause sensitization by inhalation.

#### **PART A : PROPYLENE CARBONATE:**

**Skin Toxicity:** LD50 (Rabbit): > 24 g/kg

**Ingestion Toxicity:** LD50 (Rat): 29.1 g/kg

**Mutagenicity:** Genotoxicity in vitro : Test Type: Ames test  
 Test species: Salmonella typhimurium  
 Metabolic activation: with and without metabolic activation  
 Method: OECD Test Guideline 471  
 Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test  
 Test species: Mouse  
 Cell type: Bone marrow  
 Method: OECD Test Guideline 474  
 Result: negative

**Irritation:** Skin corrosion/irritation  
 Species: Rabbit  
 Method: OECD Test Guideline 404  
 Result: No skin irritation

Serious eye damage/eye irritation  
 Species: Rabbit  
 Result: Irritating to eyes.  
 Method: OECD Test Guideline 405

#### **PART A : TALC:**

<b>Ingestion Toxicity:</b>	LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 423
<b>Mutagenicity:</b>	Genotoxicity in vitro : Test Type: In vitro gene mutation study in bacteria Test species: Salmonella typhimurium Metabolic activation: with and without metabolic activation Result: negative  Test Type: In vitro gene mutation study in bacteria Test species: Saccharomyces cerevisiae Metabolic activation: with and without metabolic activation Result: negative  Genotoxicity in vivo : Test Type: dominant lethal test Test species: Rat (male) Cell type: Bone marrow Result: negative
<b>Irritation:</b>	Skin corrosion/irritation Species: reconstructed human epidermis (RhE) Result: No skin irritation  Serious eye damage/eye irritation Species: Rabbit Result: Slight, transient irritation Method: OECD Test Guideline 405
<b>Sensitization:</b>	Test Type: Maximisation Test Species: Guinea pig Assessment: Did not cause sensitisation on laboratory animals. Method: OECD Test Guideline 406 Result: Did not cause sensitisation on laboratory animals.
<b>PART B : PIPERAZINE:</b>	
<b>Ingestion Toxicity:</b>	LD50 (Rat): ca. 2,600 mg/kg Method: OECD Test Guideline 401
<b>Inhalation Toxicity:</b>	LC0 (Rat, male and female): 1.61 mg/l Exposure time: 8 h Test atmosphere: vapour
<b>Reproductive Toxicity:</b>	Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.
<b>Irritation:</b>	Skin corrosion/irritation Result: Corrosive after 3 minutes to 1 hour of exposure  Serious eye damage/eye irritation Result: Corrosive
<b>Sensitization:</b>	Assessment: The product is a respiratory sensitiser, sub-category 1B. Assessment: The product is a skin sensitiser, sub-category 1B.

## Section 12: Ecological Information

### Ecotoxicity:

#### Product:

**Effect of Material On Aquatic:** Acute aquatic toxicity : Not classified based on available information.  
Chronic aquatic toxicity : Not classified based on available information.

### PART A : POLYMER:

**Effect of Material On Aquatic:**

Toxicity to fish : LC50 (*Oryzias latipes* (Japanese medaka)): > 3,000 mg/l  
 Exposure time: 96 h  
 Test Type: semi-static test  
 Remarks: Information given is based on data obtained from similar substances.

Toxicity to daphnia and other aquatic invertebrates : (*Daphnia magna* (Water flea)): > 1,000 mg/l  
 Exposure time: 24 h  
 Test Type: static test  
 Method: OECD Test Guideline 202  
 Remarks: Information given is based on data obtained from similar substances.

Toxicity to algae : NOEC (*Desmodesmus subspicatus* (green algae)): 1,640 mg/l  
 End point: Growth inhibition  
 Exposure time: 72 h  
 Test Type: static test  
 Method: OECD Test Guideline 201  
 Remarks: Information given is based on data obtained from similar substances.

**PART A : 4,4'-DIPHENYLMETHANE DIISOCYANATE:****Effect of Material On Aquatic:**

Toxicity to fish : LC50 (*Oryzias latipes* (Orange-red killifish)): > 3,000 mg/l  
 Exposure time: 96 h  
 Test Type: semi-static test  
 Remarks: Information given is based on data obtained from similar substances.

Toxicity to daphnia and other aquatic invertebrates: EC50 (*Daphnia magna* (Water flea)): > 100 mg/l  
 Exposure time: 24 h  
 Test Type: static test  
 Method: OECD Test Guideline 202  
 Remarks: Information given is based on data obtained from similar substances.

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC (*Daphnia magna* (Water flea)): > 10 mg/l  
 Exposure time: 21 d  
 End point: Reproduction Test  
 Test Type: semi-static test  
 Method: OECD Test Guideline 211  
 Remarks: Information given is based on data obtained from similar substances.

**PART A : PROPYLENE CARBONATE:**

**Effect of Material On Aquatic:**

Toxicity to fish : LC50 (Cyprinus carpio (Carp)): > 1,000 mg/l

Exposure time: 96 h

Test Type: semi-static test

Method: Directive 67/548/EEC, Annex V, C.1.

Toxicity to daphnia and other aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): > 1,000 mg/l

Exposure time: 48 h

Test Type: static test

Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): > 900 mg/l

End point: Growth inhibition

Exposure time: 72 h

Test Type: static test

Method: OECD Test Guideline 201

NOEC (Desmodesmus subspicatus (green algae)): 900 mg/l

End point: Growth inhibition

Exposure time: 72 h

Test Type: static test

Method: OECD Test Guideline 201

**PART B : PIPERAZINE:****Effect of Material On Aquatic:**

Toxicity to fish : LC50 (Poecilia reticulata (guppy)): > 1,800 mg/l

Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 21 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): >1,000 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC (Daphnia magna (Water flea)): 12.5 mg/l

Exposure time: 21 d

Method: OECD Test Guideline 211

**Persistence and degradability:****Product:****Biodegradation:**

No data available

**PART A : POLYMER:****Biodegradation:**

Result: Not readily biodegradable.

Biodegradation: 0 %

Exposure time: 28 d

Method: OECD Test Guideline 302C

**PART A : 4,4'-DIPHENYLMETHANE DIISOCYANATE:****Biodegradation:**

Result: Not biodegradable

Biodegradation: 0 %

Exposure time: 28 d

Method: OECD Test Guideline 302C

Remarks: Information given is based on data obtained from similar substances.

**PART A : PROPYLENE CARBONATE:**

**Biodegradation:** Result: Readily biodegradable.  
 Biodegradation: 87.1 %  
 Exposure time: 29 d  
 Method: OECD Test Guideline 301B

**PART A : TALC:**

**Biodegradation:** Result: The methods for determining biodegradability are not applicable to inorganic substances.

**PART B : PIPERAZINE:**

**Biodegradation:** Result: Readily biodegradable.  
 Biodegradation: 70 %  
 Exposure time: 28 d  
 Method: OECD Test Guideline 301F

**Bioaccumulative potential:**

**Product:**

**BioAccumulation:** No data available

**PART A : PROPYLENE CARBONATE:**

**BioAccumulation:** Partition coefficient: noctanol/water : log Pow: -0.41

**PART B : PIPERAZINE:**

**BioAccumulation:** Partition coefficient: noctanol/water : log Pow: -1.17

**Mobility in soil:**

**Product:**

**Mobility In Environmental Media:** No data available

**Notes from Section 12:** Other adverse effects  
 No data available  
 Additional ecological information : No data available

## Section 13: Disposal Considerations

**Description of waste:**

**Waste Disposal:** General advice : Do not dispose of waste into sewer.  
 Do not contaminate ponds, waterways or ditches with chemical or used container.  
 Send to a licensed waste management company.  
 Dispose of in accordance with all applicable local, state and federal regulations.

**Contaminated Packaging:** Empty remaining contents.  
 Dispose of as unused product.  
 Empty containers should be taken to an approved waste handling site for recycling or disposal.  
 Do not re-use empty containers.

## Section 14: Transport Information

<b>Transportation:</b>	CFR_RAIL_C Not dangerous goods MX_DG Not dangerous goods *ORM = ORM-D, CBL = COMBUSTIBLE LIQUIDMarine pollutant no Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.
<b>DOT:</b>	Not dangerous goods
<b>DOT Other:</b>	INLAND WATERWAYS Not dangerous goods
<b>IMDG:</b>	Not dangerous goods
<b>IATA Other:</b>	CARGO:Not dangerous goods PASSENGER:Not dangerous goods
<b>Canada TDG:</b>	Not dangerous goods
<b>Canada Other:</b>	RAIL_C:Not dangerous goods INWT_C:Not dangerous goods

## Section 15: Regulatory Information

### Safety, health and environmental regulations specific for the product:

#### Regulatory - Product Based:

##### PART A : SARA 304 Extremely Hazardous Substances Reportable Quantity:

This material does not contain any components with a section 304 EHS RQ.

##### PART A : SARA 311/312 Hazards:

Acute toxicity (any route of exposure)  
Skin corrosion or irritation  
Serious eye damage or eye irritation  
Respiratory or skin sensitisation  
Specific target organ toxicity (single or repeated exposure)

##### PART A :SARA 302:

This material does not contain any components with a section 302 EHS TPQ.

##### PART A : SARA 313:

The following components are subject to reporting levels established by SARA Title III, Section 313: 4,4'-DIPHENYLMETHANE DIISOCYANATE  
101-68-8 35.51 %

##### PART A : California Prop 65:

WARNING! This product contains a chemical known to the State of California to cause cancer.  
TALC 14807-96-6  
QUARTZ / SAND 14808-60-7

##### PART B:EPCRA - Emergency Planning and Community Right-to-Know Act:

CERCLA Reportable Quantity: This material does not contain any components with a CERCLA RQ.



**PART B : SARA 304 Extremely  
Hazardous Substances Reportable  
Quantity:**

This material does not contain any components with a section 304 EHS RQ.

**PART B : SARA 311/312 Hazards:**

Reproductive toxicity

**PART B : SARA 302:**

This material does not contain any components with a section 302 EHS TPQ.

**PART B :SARA 313:**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**PART B:California Prop 65:**

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

TALC 14807-96-6

CARBON BLACK 1333-86-4

QUARTZ / SAND 14808-60-7

FURAN 110-00-9

PROPYLENE OXIDE 75-56-9

ACETALDEHYDE 75-07-0

**Inventories:**

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

**Registration: Trade secret:**

Chemical name Identification number

POLYMER 254504001-5759

ALUMINUM SILICATES 254504001-5709

URETHANE PREPOLYMER 800986-5572P

**The components of this product  
are reported in the following  
inventories::**

TSCA : On TSCA Inventory

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

ENCS : Exempt

KECI : On the inventory, or in compliance with the inventory

PICCS : Not in compliance with the inventory

IECSC : On the inventory

**Regulatory - Ingredient Based:**

**PART A : 4,4'-DIPHENYLMETHANE DIISOCYANATE:**

**PART A : EPCRA - Emergency  
Planning and Community Right-to-  
Know Act:**

CERCLA Reportable Quantity

Component RQ (lbs) :5000

Calculated product RQ (lbs):14078

**Section 16: Additional Information**

**Revision Date:** 2019-01-25 18:33:00

**Author:** Enviance

**Notes from Section 16:** Full text of H-Statements  
PART A

H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H335 May cause respiratory irritation.  
H373 May cause damage to organs through prolonged or repeated exposure if inhaled.

#### PART B

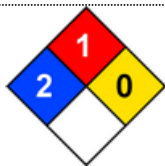
H228 Flammable solid.  
H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H361 Suspected of damaging fertility or the unborn child.

List of abbreviations and acronyms that could be, but not necessarily are, used in this SDS:

ACGIH: American Conference of Industrial Hygienists  
BEI: Biological Exposure Index  
CAS: Chemical Abstracts Service (Division of the American Chemical Society).  
CMR: Carcinogenic, Mutagenic or Toxic for Reproduction  
FG: Food grade  
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.  
H-statement: Hazard Statement  
IATA: International Air Transport Association.  
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organization  
ICAO-TI (ICAO): Technical Instructions by the "International Civil Aviation Organization"  
IMDG: International Maritime Code for Dangerous Goods  
ISO: International Organization for Standardization  
logPow: octanol-water partition coefficient  
LCxx: Lethal Concentration, for xx percent of test population  
LDxx: Lethal Dose, for xx percent of test population.  
ICxx: Inhibitory Concentration for xx of a substance  
Ecxx: Effective Concentration of xx  
N.O.S.: Not Otherwise Specified  
OECD: Organization for Economic Co-operation and Development  
OEL: Occupational Exposure Limit  
P-Statement: Precautionary Statement  
PBT : Persistent, Bioaccumulative and Toxic  
PPE: Personal Protective Equipment  
STEL: Short-term exposure limit  
STOT: Specific Target Organ Toxicity  
TLV: Threshold Limit Value  
TWA: Time-weighted average  
vPvB: Very Persistent and Very Bioaccumulative  
WEL: Workplace Exposure Level  
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act  
DOT: Department of Transportation  
FIFRA: Federal Insecticide, Fungicide, and Rodenticide Act  
HMIRC: Hazardous Materials Information Review Commission  
HMIS: Hazardous Materials Identification System  
NFPA: National Fire Protection Association  
NIOSH: National Institute for Occupational Safety and Health  
OSHA: Occupational Safety and Health Administration  
PMRA: Health Canada Pest Management Regulatory Agency  
RTK: Right to Know  
WHMIS: Workplace Hazardous Materials Information System  
NFPA Combustible Liquid Class IIIB

Comments from Section 16:

NFPA:



Other Information:

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