



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

### Product identifier used on the label:

**Product Name:** SMC/Fiberglass Adhesive – 35 minute

### Other means of identification:

**Product Codes:** 63642504673

### 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 Street, W

**Distributor City:** Plattsville

**Distributor State:** ON

**Distributor ZipCode:** N0J 1S0

**Distributor Country:** Canada

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

**Distributor Phone:** 519-684-7441

### Emergency phone number:

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

**Creation Date:** 2019-01-17

**Revision Date:** 2019-01-17 17:33:11

**Notes from Section 1:****CHEMTREC:**

For emergencies in the US, call CHEMTREC: 800-424-9300

For emergencies in Canada, call CHEMTREC: 800-424-9300

**PART A:****NFPA:**

Health: 2

Flammability: 1

Instability: 1

**HMIS III:**

HEALTH: 2\*

FLAMMABILITY: 1

PHYSICAL HAZARD: 1

0 = Not significant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme, \* = Chronic

**NFPA Flammable and Combustible Liquids Classification:**

Combustible Liquid Class IIIB

**PART B:****NFPA:**

Health: 2

Flammability: 1

Instability: 0

**HMIS III:**

HEALTH: 2

FLAMMABILITY: 1

PHYSICAL HAZARD: 0

0 = Not significant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme, \* = Chronic

**NFPA Flammable and Combustible Liquids Classification:**

Combustible Liquid Class IIIB

**Section 2: Hazards Identification****Classification of the chemical in accordance with CFR 1910.1200(d)(f):****Signal Words:**

Danger

**Product:****GHS Class:****GHS Classification:**

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.
  - 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 must 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 or doctor/physician 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+P233 - Store in a well-ventilated place. 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		Concentration: > = 10.00 - < 15.00%		
PART A: SCAVENGER		Concentration: > = 10.00 - < 15.00%		
PART A: URETHANE PREPOLYMER		Concentration: > = 5.00 - < 10.00%		
PART A: 4,4'-DIPHENYLMETHANE DIISOCYANATE	101-68-8	Concentration: 35.51%		
PART A: TALC	14807-96-6	Concentration: 10.22%		
PART A: PROPYLENE CARBONATE	108-32-7	Concentration: 1.49%		
PART B: TALC	14807-96-6	Concentration: 22.22%		
PART B: PIPERAZINE	110-85-0	Concentration: 0.77%		

#### Product:

**Notes::** Other hazards: None known.

**Comments:**

PART A:  
Substance/Mixture: Mixture

Hazardous components

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

PART B:  
Substance/Mixture: Mixture

Hazardous components

## 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.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause respiratory irritation.  
Suspected of damaging fertility or the unborn child.  
May cause damage to organs through prolonged or repeated exposure if inhaled.

## Section 5: Firefighting Measures

### Suitable and unsuitable extinguishing media

<b>Extinguishing Media:</b>	<p>Suitable:</p> <p>Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.</p> <p>Water spray Foam Carbon dioxide (CO<sub>2</sub>) Dry chemical</p> <p>Specific extinguishing methods: Product is compatible with standard fire-fighting agents.</p>
<b>Unsuitable Media:</b>	High volume water jet

### Specific hazards arising from the chemical

<b>Hazardous Combustion Products:</b>	<p>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</p>
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### Special protective equipment and precautions for fire-fighters

<b>Fire Fighting Instructions:</b>	<p>Specific hazards during firefighting: Do not allow run-off from fire fighting to enter drains or water courses.</p>
<b>Protective Equipment:</b>	Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus.
<b>Notes from Section 5:</b>	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

<b>Personnel Precautions:</b>	<p>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.</p>
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### Methods and materials for containment and cleaning up

<b>Spill Cleanup Measures:</b>	<p>Methods and materials for containment and cleaning up: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.</p>
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### Environmental precautions

<b>Environmental Precautions:</b>	<p>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.</p>
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**Notes from Section 6:**

Other information: Comply with all applicable federal, state, and local regulations.

**Section 7: Handling and Storage****Precautions for safe handling****Handling:**

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.

**Hygiene Practices:**

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****Storage:**

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.

**Section 8: Exposure Controls/Personal Protection****Exposure Guidelines****Exposure limit:**

Components with workplace control parameters:

PART A:

Components: SCAVENGER

CAS-No.: 254504001-5709

Value type (Form of exposure): TWA

Control parameters/Permissible concentration: 1 mg/m<sup>3</sup> Respirable fraction.

Basis: ACGIH

Components: 4,4'-DIPHENYLMETHANE DIISOCYANATE

CAS-No.: 101-68-8

Value type (Form of exposure): TWA

Control parameters/Permissible concentration: 0.005 ppm

Basis: ACGIH

Value type (Form of exposure): REL

Control parameters/Permissible concentration: 0.005 ppm; 0.05 mg/m<sup>3</sup>

Basis: NIOSH/GUIDE

Value type (Form of exposure): Ceil\_Time

Control parameters/Permissible concentration: 0.020 ppm; 0.2 mg/m<sup>3</sup>

Basis: NIOSH/GUIDE

Value type (Form of exposure): Ceiling

Control parameters/Permissible concentration: 0.02 ppm; 0.2 mg/m<sup>3</sup>

Basis: OSHA\_TRANS

Components: TALC  
 CAS-No.: 14807-96-6  
 Value type (Form of exposure): TWA  
 Control parameters/Permissible concentration: 2 mg/m3 Respirable fraction.  
 Basis: ACGIH

Value type (Form of exposure): REL  
 Control parameters/Permissible concentration: 2 mg/m3 Respirable.  
 Basis: NIOSH/GUIDE

Value type (Form of exposure): TWA  
 Control parameters/Permissible concentration: 0.1 mg/m3 Respirable.  
 Basis: Z3

Value type (Form of exposure): TWA  
 Control parameters/Permissible concentration: 0.3 mg/m3 Total dust.  
 Basis: Z3

**PART B:**

Components: TALC  
 CAS-No.: 14807-96-6  
 Value type (Form of exposure): TWA  
 Control parameters/Permissible concentration: 2 mg/m3 Respirable fraction.  
 Basis: ACGIH

Value type (Form of exposure): REL  
 Control parameters/Permissible concentration: 2 mg/m3 Respirable.  
 Basis: NIOSH/GUIDE

Value type (Form of exposure): TWA  
 Control parameters/Permissible concentration: 0.1 mg/m3 Respirable.  
 Basis: Z3

Value type (Form of exposure): TWA  
 Control parameters/Permissible concentration: 0.3 mg/m3 Total dust.  
 Basis: Z3

Components: PIPERAZINE  
 CAS-No.: 110-85-0  
 Value type (Form of exposure): TWA  
 Control parameters/Permissible concentration: 0.03 ppm Inhalable fraction and vapor (as piperazine)  
 Basis: ACGIH

Value type (Form of exposure): TWA  
 Control parameters/Permissible concentration: 0.03 ppm Inhalable fraction and vapor (as piperazine)  
 Basis: ACGIHLIS\_P

**Appropriate engineering controls**

**Engineering Controls:** 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.

**Individual protection measures**

**Eye Protection:** Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.

<b>Skin Protection:</b>	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>Other Protective:</b>	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>Hygiene Practices:</b>	Wash hands before breaks and at the end of workday. When using do not eat or drink. When using do not smoke.

## Section 9: Physical and Chemical Properties

### Physical and chemical properties

<b>Physical State:</b>	PART A: Liquid PART B: Liquid
	Appearance: PART A: Viscous PART B: Viscous
<b>Color:</b>	PART A: Beige PART B: Green
<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>Boiling Temperature:</b>	PART A: > 392 deg F/> 200 deg C
<b>Flash Point:</b>	PART A: > 212 deg F/> 100 deg C PART B: > 200.1 deg F/> 93.4 deg C
<b>Flash Point Method:</b>	PART B: Seta closed cup
<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>	Thermal decomposition: PART A: No data available PART B: No data available



<b>Vapor Pressure:</b>	PART A: < 0.01333 hPa (25 deg C)  PART B: 3 hPa (25 deg C) Calculated Vapor Pressure
<b>Vapor Density:</b>	Relative: PART A: > 1 AIR=1 PART B: > 1 AIR=1
<b>Density:</b>	PART A: 1.288 g/cm <sup>3</sup> (20 deg C) PART B: ca. 1.225 g/cm <sup>3</sup> (20 deg C)  Relative density: PART A: No data available PART B: 1.225 (77.00 deg F)
<b>Solubility:</b>	Solubility in other solvents: PART A: No data available PART B: No data available
<b>Solubility In Water:</b>	PART A: Practically insoluble PART B: Insoluble
<b>Evaporation Rate:</b>	PART A: < 1 n-Butyl Acetate  PART B: No data available
<b>Partition Coefficient:</b>	n-octanol/water: PART A: No data available PART B: No data available
<b>Viscosity:</b>	Kinematic: PART A: No data available PART B: No data available
<b>Odor Threshold:</b>	PART A: No data available PART B: No data available
<b>Dynamic Viscosity:</b>	PART A: Ca. 20,000 mPa.s PART B: Ca. 18,000 mPa.s (25 deg C)
<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 (NOx)

**Section 11: Toxicological Information**

**Toxicological Information:**

**Product:**

**Acute Toxicity:** Not classified based on available information.

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

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

Product:  
 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:** Germ cell 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.

Skin corrosion/irritation:  
Components: TALC:  
Result: Possibly irritating to skin

Components: ZEOLITES:  
Result: Possibly irritating to skin

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.

Serious eye damage/eye irritation:  
Components: TALC:  
Result: Possibly irritating to eyes

Components: ZEOLITES:  
Result: Mildly irritating to eyes

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

**OSHA Carcinogen:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**NTP Carcinogen:** 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.

**Notes from Section 11:** Further information:  
Product:  
Remarks: No data available

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

**Skin Toxicity:** Acute dermal toxicity: LD 50 (Rabbit): > 7,900 mg/kg

**Ingestion Toxicity:** Acute oral toxicity: LD 50 (Rat): 9,200 mg/kg

**Inhalation Toxicity:** Acute inhalation toxicity:  
LC 50 (Rat): 0.369 mg/l  
Exposure time: 4 h

LC 50 (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

<b>Sensitization:</b>	Respiratory or skin sensitisation: Assessment: May cause sensitization by inhalation.  Assessment: May cause sensitization by skin contact.
<b>Notes from Section 11:</b>	Further information: Components: 4,4'-DIPHENYLMETHANE DIISOCYANATE: Remarks: Lung
<b>PART A: POLYMER:</b>	
<b>Skin Toxicity:</b>	Acute dermal toxicity: (Rabbit): > 9,400 mg/kg Remarks: Information given is based on data obtained from similar substances.
<b>Ingestion Toxicity:</b>	Acute oral toxicity: LD 50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 425 GLP: Yes
<b>Inhalation Toxicity:</b>	Acute inhalation toxicity: Assessment: The component/mixture is classified as acute inhalation toxicity, category 4.
<b>Mutagenicity:</b>	Germ cell mutagenicity: 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: Not irritating to eyes Remarks: Information given is based on data obtained from similar substances.
<b>Sensitization:</b>	Respiratory or skin sensitisation: Test Type: Maximisation Test (GPMT) Species: Guinea pig Assessment: May cause sensitization 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.
<b>PART A: PROPYLENE CARBONATE:</b>	
<b>Skin Toxicity:</b>	Acute dermal toxicity: LD 50 (Rabbit): > 24 g/kg
<b>Ingestion Toxicity:</b>	Acute oral toxicity: LD 50 (Rat): 29.1 g/kg

**Mutagenicity:**

Germ cell 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: Not irritating to skin

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

**PART A: URETHANE PREPOLYMER:****Irritation:**

Skin corrosion/irritation:  
 Result: Not irritating to skin

Serious eye damage/eye irritation:  
 Result: Not irritating to eyes

**Sensitization:**

Respiratory or skin sensitisation:  
 Assessment: May cause sensitization by skin contact.

Assessment: May cause sensitization by inhalation.

**PART B: PIPERAZINE:****Ingestion Toxicity:**

Acute oral toxicity:  
 LD50 (Rat): ca. 2,600 mg/kg  
 Method: OECD Test Guideline 401

**Inhalation Toxicity:**

Acute inhalation toxicity:  
 LC0 (Rat, male and female): 1.61 mg/l  
 Exposure time: 8 h  
 Test atmosphere: Vapour

**Reproductive Toxicity:**

Reproductive toxicity - Assessment: Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

**Irritation:**

Skin corrosion/irritation:  
 Result: Corrosive after 3 minutes to 1 hour of exposure

Serious eye damage/eye irritation:  
 Result: Corrosive to eyes

**Sensitization:**

Respiratory or skin sensitisation:  
 Assessment: The product is a respiratory sensitiser, sub-category 1B.

Assessment: The product is a skin sensitiser, sub-category 1B.

**PART B: TALC:**

IARC Carcinogen:

IARC: Group 2B: Possibly carcinogenic to humans  
TALC 14807-96-6

## Section 12: Ecological Information

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

Ecotoxicity:

Components: 4,4'-DIPHENYLMETHANE DIISOCYANATE:

Toxicity to fish:

LC50 (Oryzias latipes (Orange-red killifish)): &gt; 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 (Water flea (Daphnia magna)): &gt; 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 (Water flea (Daphnia magna)): &gt; 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: POLYMER:**

Ecotoxicity:

Components: POLYMER:

Toxicity to fish:

LC 50 (Oryzias latipes (Japanese medaka)): &gt; 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)): &gt; 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: PROPYLENE CARBONATE:**

**Ecotoxicity:**

Components: PROPYLENE CARBONATE:

Toxicity to fish:

LC50 (Cyprinus carpio (Carp)): &gt; 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 (Water flea (Daphnia magna)): &gt; 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)): &gt; 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:****Ecotoxicity:**

Components: PIPERAZINE:

Toxicity to fish:

LC 50 (Poecilia reticulata (guppy)): &gt; 1,800 mg/l

Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:

EC 50 (Water flea (Daphnia magna)): 21 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae:

EC 50 (Pseudokirchneriella subcapitata (green algae)): &gt; 1,000 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):

NOEC (Water flea (Daphnia magna)): 12.5 mg/l

Exposure time: 21 d

Method: OECD Test Guideline 211

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

Persistence and degradability:

Components: 4,4'-DIPHENYLMETHANE DIISOCYANATE:

Biodegradability:

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: POLYMER:**

**Biodegradation:** Persistence and degradability:  
 Components: POLYMER:  
 Biodegradability:  
 Result: Not readily biodegradable.  
 Biodegradation: 0 %  
 Exposure time: 28 d  
 Method: OECD Test Guideline 302C

**PART A: PROPYLENE CARBONATE:**

**Biodegradation:** Persistence and degradability:  
 Components: PROPYLENE CARBONATE:  
 Biodegradability:  
 Result: Readily biodegradable  
 Biodegradation: 87.1 %  
 Exposure time: 29 d  
 Method: OECD Test Guideline 301B

**PART B: PIPERAZINE:**

**Biodegradation:** Persistence and degradability:  
 Components: PIPERAZINE  
 Biodegradability:  
 Result: Readily biodegradable  
 Biodegradation: 70 %  
 Exposure time: 28 d  
 Method: OECD Test Guideline 301F

**PART A: PROPYLENE CARBONATE:**

**BioAccumulation:** Bioaccumulative potential:  
 Components: PROPYLENE CARBONATE:  
 Partition coefficient: n-octanol/water: Log Pow: -0.41

**PART B: PIPERAZINE:**

**BioAccumulation:** Bioaccumulative potential:  
 Components: PIPERAZINE:  
 Partition coefficient: n-octanol/water: Log Pow: -1.17

**Mobility in soil:**

**Product:**

**Notes from Section 12:** Mobility in soil:  
 Components: No data available  
  
 Other adverse effects: No data available  
  
 Product:  
 Additional ecological information: No data available

**Section 13: Disposal Considerations**

**Description of waste:**

**Waste Disposal:** Disposal methods:  
 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**

**DOT Other:** U.S. DOT - ROAD: Not dangerous goods  
 U.S. DOT - RAIL: Not dangerous goods  
 U.S. DOT - INLAND WATERWAYS: Not dangerous goods

**IMDG:** Not dangerous goods

**IATA Other:** INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO: Not dangerous goods  
 INTERNATIONAL AIR TRANSPORT ASSOCIATION – PASSENGER: Not dangerous goods

**Canada Other:** TRANSPORT CANADA - ROAD: Not dangerous goods  
 TRANSPORT CANADA - RAIL: Not dangerous goods  
 TRANSPORT CANADA - INLAND WATERWAYS: Not dangerous goods

**Notes from Section 14:** MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES:  
 Not dangerous goods

\*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Marine 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.

**Section 15: Regulatory Information**

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

**Regulatory - Product Based:**

**SARA:**

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

**Section 312 Hazard Category:**

PART A:  
 SARA 311/312 Hazards:  
 Acute Health Hazard  
 Chronic Health Hazard

PART B:  
 SARA 311/312 Hazards: Chronic Health Hazard

**State:**

PART A:  
California Prop 65: WARNING! This product contains a chemical known to the State of California to cause cancer.  
QUARTZ/SAND 14808-60-7

PART B:  
California Prop 65:  
WARNING! This product contains a chemical known to the State of California to cause cancer.  
QUARTZ/SAND 14808-60-7  
CARBON BLACK 1333-86-4

**Section 313 Toxic Release Form:**

PART B:  
SARA 313 Component(s)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.

**TSCA 8(b): Inventory Status:**

The components of this product are reported in the following inventories:  
On TSCA Inventory

**Canada DSL:**

The components of this product are reported in the following inventories:  
All components of this product are on the Canadian DSL.

**Australia Chemical Inventory Status:**

The components of this product are reported in the following inventories:  
AUSTR: On the inventory, or in compliance with the inventory

**Japan Chemical Inventory Status:**

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

**Korean Chemical Inventory Status:**

The components of this product are reported in the following inventories:  
KECL: On the inventory, or in compliance with the inventory

**Philippines Chemical Inventory Status:**

The components of this product are reported in the following inventories:  
PICCS: Not in compliance with the inventory

**International Chemical Inventory Lists:**

The components of this product are reported in the following inventories:  
IECSC: On the inventory, or in compliance with the inventory

Inventories:  
AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECL (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

**Regulatory - Ingredient Based:****PART A: POLYMER:****Notes 1:**

Registration: Trade Secret  
Chemical Name: POLYMER  
Identification number: 254504001-5759

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

**Section 304 CERCLA RQ:** Components: 4,4'-DIPHENYLMETHANE DIISOCYANATE  
 CAS-No.: 101-68-8  
 Component RQ: 5000 lbs  
 Calculated product RQ: 14206.159791 lbs

**Section 313 Toxic Release Form:** SARA 313 Component(s):  
 101-68-8 101-68-8 35.51 %

## Section 16: Additional Information

**Creation Date:** 2019-01-17

**Revision Date:** 2019-01-17 17:33:11

**Revision Notes:** Supersedes: 05/25/2015

**Version Number:** 1.1

**Notes from Section 16:** PART A:  
 NFPA:  
 Health: 2  
 Flammability: 1  
 Instability: 1

HMIS III:  
 HEALTH: 2\*  
 FLAMMABILITY: 1  
 PHYSICAL HAZARD: 1  
 0 = Not significant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme, \* = Chronic

NFPA Flammable and Combustible Liquids Classification:  
 Combustible Liquid Class III B

PART B:  
 NFPA:  
 Health: 2  
 Flammability: 1  
 Instability: 0

HMIS III:  
 HEALTH: 2  
 FLAMMABILITY: 1  
 PHYSICAL HAZARD: 0  
 0 = Not significant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme, \* = Chronic

NFPA Flammable and Combustible Liquids Classification:  
 Combustible Liquid Class III B

Full text of H-Statements referred to under sections 2 and 3.:

PART A:  
 H228 Flammable solid.  
 H314 Causes severe skin burns and eye damage.  
 H315 Causes skin irritation.  
 H317 May cause an allergic skin reaction.  
 H318 Causes serious eye damage.  
 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.

PART B:  
 H228 Flammable solid.  
 H314 Causes severe skin burns and eye damage.

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.

Sources of key data used to compile the Safety Data Sheet:

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

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

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

#### Other Information:

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