



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

Product identifier used on the label:

Product Name: Epoxy Panel Bonder 90 Minute

Other means of identification:

Product Codes: 63642506421

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

Business Phone: 508-795-5000

Distributor: Saint-Gobain Canada, Inc.

Distributor Address 1: 28 Albert St, W.

Distributor City: Plattsville

Distributor State: ON

Distributor ZipCode: N0J 1S0

Distributor Country: Canada

Distributor Web: www.Nortonabrasives.com

Distributor Phone: 519-684-7441

Emergency phone number:

Emergency Phone: 508-795-5000

Distributor Emergency Phone: 508-795-5000

Creation Date: 04/25/2011

Revision Date: 2018-07-18 15:24:33

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

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 corrosion: Category 1
 Serious eye damage: Category 1
 Skin sensitization: Category 1
 Carcinogenicity: Category 1A
 Reproductive toxicity: Category 1B

Hazard Statements: H314 - Causes severe skin burns and eye damage.
 H317 - May cause an allergic skin reaction.
 H318 - Causes serious eye damage.
 H350 - May cause cancer .
 H360 - May damage fertility or the unborn child .

Precautionary Statements: P201 - Obtain special instructions before use.
 P202 - Do not handle until all safety precautions have been read and understood.
 P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
 P264 - Wash skin thoroughly after handling.
 P272 - Contaminated work clothing should not be allowed out of the workplace.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P310 - Immediately call a POISON CENTER or doctor/physician.
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
 P308+P313 - IF exposed or concerned: Get medical advice/attention.
 P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
 P363 - Wash contaminated clothing before reuse.
 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
POLYMER (PART A)	800986-5211P	> = 50.00 - < 60.00%		
EPOXY RESIN MODIFIER (PART A)	800986-5520P	> = 10.00 - < 15.00%		
ORGANOSILOXANE (PART A)	800986-5522P	> = 1.50 - < 5.00%		
SILICA VITREOUS (PART A)	60676-86-0	16.50%		
CARBON BLACK (PART A)	1333-86-4	0.40%		
CRISTOBALITE (PART A)	14464-46-1	0.14%		
AROMATIC AMINE (PART B)	800986-5525P	> = 1.50 - < 5.00%		
SILICA VITREOUS (PART B)	60676-86-0	14.73%		
DIETHYLENE GLYCOL DI(AMINOPROPYL)ETHER (PART B)	4246-51-9	14.13%		
2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL (PART B)	90-72-2	7.11%		
METHYLPENTAMETHYLENEDIAMINE (PART B)	15520-10-2	1.58%		
BIS(DIMETHYLLAMINOETHYL)PHENOL (PART B)	71074-89-0	1.18%		

CRISTOBALITE (PART B)	14464-46-1	0.13%		
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Product:

Notes: Other hazards: None known.

Section 4: First Aid Measures

Description of necessary measures:

Eye Contact: In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
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.
Keep patient warm and at rest.
If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.

Ingestion: If swallowed:
Get medical attention immediately.
Do NOT induce vomiting.
Rinse mouth with water.
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:

Other First Aid: General advice:
Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

Indication of immediate medical attention and special treatment needed

Note To Physicians: No hazards which require special first aid measures.

Notes from Section 4: Most important symptoms and effects, both acute and delayed:
This product contains methanol which can cause intoxication and central nervous system depression. Methanol is metabolized to formic acid and formaldehyde. These metabolites can cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used to prevent methanol metabolism. Ethanol administration is indicated in symptomatic patients or at blood methanol concentrations above 20 ug/dl. Methanol is effectively removed by hemodialysis.

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)
Drowsiness
May cause an allergic skin reaction.
Causes serious eye damage.
May cause cancer.
May damage fertility or the unborn child.
Causes severe burns.

Section 5: Firefighting Measures

Suitable and unsuitable extinguishing media

Extinguishing Media:	<p>Suitable:</p> <p>Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.</p> <p>Water spray Foam Carbon dioxide (CO₂) Dry chemical</p>
Unsuitable Media:	High volume water jet

Specific hazards arising from the chemical

Hazardous Combustion Byproducts:	<p>Carbon dioxide and carbon monoxide</p> <p>Hydrocarbons</p> <p>phenols</p> <p>Nitrogen oxides (NO_x)</p> <p>Ammonia</p> <p>Hydrogen</p> <p>formaldehyde</p> <p>acid vapors</p> <p>carboxylic acids</p> <p>Methanol</p> <p>silicone polymers</p> <p>silicon dioxide</p> <p>various hydrocarbons</p> <p>nitrogen oxides (NO_x)</p>
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Special protective equipment and precautions for fire-fighters

Protective Equipment:	Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus.
Notes from Section 5:	<p>Specific extinguishing methods: Product is compatible with standard fire-fighting agents.</p> <p>Further information: Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.</p>

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personnel Precautions:	<p>Personal precautions, protective equipment and emergency procedures:</p> <p>Use personal protective equipment.</p> <p>Ensure adequate ventilation.</p> <p>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

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

Environmental precautions

Environmental Precautions:	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.
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: 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.
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Hygiene Practices:	Wash hands before breaks and at the end of workday. When using do not eat or drink. Ensure that eyewash stations and safety showers are close to the workstation location. When using do not smoke.
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Conditions for safe storage, including any incompatibilities

Storage:	Conditions for safe storage: Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. 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 limit:

Components with workplace control parameters:

PART A:

Components: SILICA VITREOUS

CAS-No.: 60676-86-0

NIOSH/GUIDE REL: 6 mg/m³

Z3 TWA: 0.8 mg/m³

TN OEL TWA: 0.1 mg/m³ Respirable dust.

Z1A TWA: 0.1 mg/m³ Respirable dust.

US CA OEL TWA PEL: 0.1 mg/m³ Respirable dust.

TX ESL ST ESL: 27 µg/m³ Particulate.

TX ESL AN ESL: 2 µg/m³ Particulate.

Components: CARBON BLACK

CAS-No.: 1333-86-4

NIOSH/GUIDE REL: 0.1 mg/m³, 3.5 mg/m³

OSHA_TRANS PEL: 3.5 mg/m³

ACGIH TWA: 3 mg/m³ Inhalable fraction.

Components: CRISTOBALITE

CAS-No.: 14464-46-1

ACGIH TWA: 0.025 mg/m³ Respirable fraction.

Z3 TWA: 0.15 mg/m³ Total dust.

Z3 TWA: 0.15 mg/m³ Total dust.

Z1A TWA: 0.05 mg/m³ Respirable dust.

NIOSH/GUIDE REL: 5 mg/m³ Fiber, total

NIOSH/GUIDE REL: 5 mg/m³ fibers, total dust

NIOSH/GUIDE REL: 3 fibre/cm³ Dust

NIOSH/GUIDE REL: 3 fibre/cm³ Fiber.

PART B:

Components: SILICA VITREOUS

CAS-No.: 60676-86-0

NIOSH/GUIDE REL: 6 mg/m³

Z3 TWA: 0.8 mg/m³

TN OEL TWA: 0.1 mg/m³ Respirable dust.

Z1A TWA: 0.1 mg/m³ Respirable dust.

US CA OEL TWA PEL: 0.1 mg/m³ Respirable dust.

TX ESL ST ESL: 27 µg/m³ Particulate.

TX ESL AN ESL: 2 µg/m³ Particulate.

Components: CRISTOBALITE

CAS-No.: 14464-46-1

ACGIH TWA: 0.025 mg/m³ Respirable fraction.

Z3 TWA: 0.15 mg/m³ Total dust.

Z3 TWA: 0.05 mg/m³ Respirable.

Z1A TWA: 0.05 mg/m³ Respirable dust.

NIOSH/GUIDE REL: 5 mg/m³ Fiber, total

NIOSH/GUIDE REL: 5 mg/m³ fibers, total dust

NIOSH/GUIDE REL: 3 fibre/cm³ Dust

NIOSH/GUIDE REL: 3 fibre/cm³ Fiber.

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 and face shield when there is potential for exposure of the eyes or face to liquid, vapor or mist.
Maintain eye wash station in immediate work area.

Skin Protection:	<p>Wear as appropriate: impervious clothing Chemical resistant apron 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).</p>
Hand Protection:	<p>Remarks: The suitability for a specific workplace should be discussed with the producers of the protective gloves.</p>
Respiratory Protection:	<p>In the case of vapour formation use a respirator with an approved filter.</p> <p>A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.</p>
Other Protective:	<p>Body protection: Wear as appropriate: impervious clothing Chemical resistant apron 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).</p>
Hygiene Practices:	<p>Wash hands before breaks and at the end of workday. When using do not eat or drink. Ensure that eyewash stations and safety showers are close to the workstation location. When using do not smoke.</p>

Section 9: Physical and Chemical Properties

Physical and chemical properties

Physical State:	<p>PART A: Liquid PART B: Liquid</p> <p>Appearance: PART A: Viscous PART B: Viscous</p>
Color:	<p>PART A: Black PART B: Tan</p>
Odor:	<p>PART A: No data available PART B: Very faint, amine-like</p>
pH:	<p>PART A: No data available PART B: No data available</p>
Boiling Temperature:	<p>PART A: > 302 deg F/> 150 deg C</p>
Flash Point:	<p>PART A: > 210 deg F/> 99 deg C PART B: > 200.1 deg F/> 93.4 deg C</p>
Flash Point Method:	<p>PART A: Seta closed cup PART B: Seta closed cup</p>

Lower Flammable Limit:	PART A: No data available PART B: No data available
Upper Flammable Limit:	PART A: No data available PART B: No data available
Decomposition Temperature:	Thermal decomposition: PART A: No data available PART B: No data available
Vapor Pressure:	PART A: < 0.1 hPa (20 deg C) PART B: < 10 hPa (20 deg C)
Vapor Density:	Relative: PART A: No data available PART B: > 1(Air = 1.0)
Density:	PART A: 1.089 g/cm ³ (20 deg C) PART B: 1.13 g/cm ³ (20 deg C)
	Relative: PART A: 1.089 (20 deg C) PART B: 1.13 (25 deg C)
Solubility:	Solubility in other solvents: PART A: No data available PART B: No data available
Solubility In Water:	PART A: Insoluble PART B: Practically insoluble
Evaporation Rate:	PART A: No data available PART B: No data available
Viscosity:	Kinematic: PART A: > 10,000 mm ² /s (40 deg C) PART B: > 10,000 mm ² /s (40 deg C)
Odor Threshold:	PART A: No data available PART B: No data available
Octanol Water Partition Coef:	PART A: No data available PART B: No data available
Dynamic Viscosity:	PART A: No data available PART B: No data available
Oxidizing Properties:	PART A: No data available PART B: No data available

Section 10: Stability and Reactivity

Reactivity:

Reactivity: No decomposition if stored and applied as directed.

Chemical Stability:

Chemical Stability: Stable under recommended storage conditions.

Possibility of hazardous reactions:

Hazardous Polymerization: Possibility of hazardous reactions: Product will not undergo hazardous polymerization.

Conditions To Avoid:

Conditions To Avoid: Excessive heat
heat
Exposure to air.
Exposure to moisture

Incompatible Materials:

Incompatible Materials:	None known. Acids Amines Bases fluorides Oxidizing agents peroxides water Peroxides
Possible Decomposition Products:	Carbon dioxide and carbon monoxide formaldehyde-like Hydrocarbons Methanol Nitrogen oxides (NOx) phenols silicone polymers Ammonia nitrogen oxides silicon dioxide various hydrocarbons

Section 11: Toxicological Information

Toxicological Information:**Product:**

Acute Toxicity: Not classified based on available information.

Skin Toxicity: ALIPHATIC AMINE:
Acute dermal toxicity:
LD 50 (Rabbit): Estimated > 2,500 mg/kg
LD 50 (Rat): > 2,150 mg/kg
Method: OECD Test Guideline 402

Ingestion Toxicity: ALIPHATIC AMINE:
Acute oral toxicity
LD 50 (Rat): ca. 3,160 mg/kg

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

Carcinogenicity: May cause cancer.

Mutagenicity:	Germ cell mutagenicity: Not classified based on available information.
	<p>AROMATIC AMINE: Genotoxicity in vitro: Test Type: unscheduled DNA synthesis assay Test species: rat hepatocytes Method: OECD Test Guideline 482 Result: negative</p> <p>Test Type: Ames test Test species: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative GLP: yes</p> <p>Test Type: In vitro mammalian cell gene mutation test Test species: Chinese hamster lung cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative GLP: yes</p>
	<p>Genotoxicity in vivo: Test Type: Micronucleus test Test species: Mouse Method: OECD Test Guideline 474 Result: negative GLP: yes</p>
Reproductive Toxicity:	May damage fertility or the unborn child.
	<p>AROMATIC AMINE: Reproductive toxicity - Assessment: Clear evidence of adverse effects on development, based on animal experiments.</p>
Irritation:	<p>Skin corrosion/irritation: Causes severe burns. Product: Remarks: May cause skin irritation in susceptible persons., Causes severe skin burns and eye damage. ALIPHATIC AMINE: Result: Corrosive to skin EPOXY RESIN CURING AGENT: Result: Corrosive to skin Serious eye damage/eye irritation: Causes serious eye damage. Product: Remarks: May cause irreversible eye damage. ALIPHATIC AMINE: Result: Corrosive to eyes EPOXY RESIN CURING AGENT: Result: Corrosive to eyes</p>
Sensitization:	<p>Respiratory or skin sensitisation: Skin sensitisation: May cause an allergic skin reaction. Respiratory sensitisation: Not classified based on available information.</p>
	<p>ALIPHATIC AMINE: Assessment: May cause sensitization by skin contact.</p>
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.
IARC Carcinogen:	Group 1: Carcinogenic to humans
NTP Carcinogen:	Known to be human carcinogen
POLYMER (PART A):	
Skin Toxicity:	<p>Acute dermal toxicity: LD 50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 402 Assessment: Not classified as acutely toxic by dermal absorption under GHS.</p>

Ingestion Toxicity:

Acute oral toxicity:
 LD 50 (Rat): > 2,000 mg/kg
 Method: OECD Test Guideline 420
 Assessment: No adverse effect has been observed in acute oral toxicity tests.

Mutagenicity:

Germ cell mutagenicity:
 Genotoxicity in vitro:
 Test Type: in vitro assay
 Test species: Rodent cell line
 Metabolic activation: without metabolic activation
 Result: positive

Test Type: in vitro assay
 Test species: Rodent cell line
 Metabolic activation: with metabolic activation
 Result: negative

Test Type: Ames test
 Metabolic activation: with and without metabolic activation
 Result: negative

Genotoxicity in vivo:
 Test Type: in vivo assay
 Test species: Mouse (male)
 Application Route: Ingestion
 Result: negative

Irritation:

Skin corrosion/irritation:
 Result: Slightly irritating to skin

Serious eye damage/eye irritation:
 Result: Slightly irritating to eyes

Sensitization:

Respiratory or skin sensitisation:
 Test Type: Local lymph node assay
 Method: OECD Test Guideline 429
 Result: The product is a skin sensitiser, sub-category 1B.

METHYLPENTAMETHYLENEDIAMINE (PART B):**Skin Toxicity:**

Acute dermal toxicity:
 LD50 (Rat, male and female): 1,870 mg/kg
 Method: OECD Test Guideline 402
 GLP: no
 Remarks: Information given is based on data obtained from similar substances.

Ingestion Toxicity:

Acute oral toxicity:
 LD50 (Rat, male): 1,690 mg/kg
 Method: OECD Test Guideline 401
 GLP: no

Inhalation Toxicity:

Acute inhalation toxicity:
 LC50 (Rat, male and female): 4.9 mg/l
 Exposure time: 1 h
 Test atmosphere: dust/mist
 Method: OECD Test Guideline 403
 GLP: yes

Mutagenicity:

Germ cell mutagenicity:
 Genotoxicity in vitro:
 Test Type: Chromosome aberration test in vitro
 Test species: Human lymphocytes
 Metabolic activation: with and without metabolic activation
 Method: OECD Test Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
 Result: negative
 GLP: yes

Test species: mouse lymphoma cells
 Metabolic activation: with and without metabolic activation
 Method: OECD Test Guideline 476
 Result: negative
 GLP: yes

Genotoxicity in vivo:
 Test Type: In vivo micronucleus test
 Test species: Mouse (male and female)
 Application Route: inhalation (dust/mist/fume)
 Method: OECD Test Guideline 474
 Result: negative
 GLP: yes
 Remarks: Information given is based on data obtained from similar substances.

Irritation:

Skin corrosion/irritation:
 Species: Rabbit
 Method: OECD Test Guideline 404
 Result: Corrosive after 3 minutes or less of exposure

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

Sensitization:

Respiratory or skin sensitisation:
 Species: Guinea pig
 Assessment: Did not cause sensitisation on laboratory animals.

AROMATIC AMINE (PART B):**Ingestion Toxicity:**

Acute oral toxicity:
 LD 50 (Rat): ca. 970 mg/kg

Irritation:

Skin corrosion/irritation:
 Species: Rabbit
 Result: Corrosive to skin

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

BIS(DIMETHYLLAMINOETHYL)PHENOL (PART B):**Irritation:**

Skin corrosion/irritation:
 Result: Corrosive to skin

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

CRISTOBALITE (PART A):**Carcinogenicity:**

Carcinogenicity - Assessment: Human carcinogen.

Irritation:	<p>Skin corrosion/irritation: Result: Possibly irritating to skin</p> <p>Serious eye damage/eye irritation: Result: Possibly irritating to eyes</p>
IARC Carcinogen:	Group 2B: Possibly carcinogenic to humans
NTP Carcinogen:	Reasonably anticipated to be a human carcinogen
CARBON BLACK (PART A):	
Skin Toxicity:	Acute dermal toxicity: LD 50 (Rabbit): > 3 g/kg
Ingestion Toxicity:	Acute oral toxicity: LD 50 (Rat): > 10,000 mg/kg
Carcinogenicity:	Carcinogenicity - Assessment: Limited evidence of carcinogenicity in inhalation studies with animals.
Irritation:	<p>Skin corrosion/irritation: Result: Not irritating to skin</p> <p>Serious eye damage/eye irritation: Result: Slightly irritating to eyes</p>
IARC Carcinogen:	Yes
SILICA VITREOUS (PART B):	
Irritation:	Serious eye damage/eye irritation: Result: Possibly irritating to eyes
ORGANOSILOXANE (PART A):	
Skin Toxicity:	Acute dermal toxicity: LD 50 (Rabbit): 4,250 mg/kg
Ingestion Toxicity:	Acute oral toxicity: LD 50 (Rat): 8,025 mg/kg Method: OECD Test Guideline 401
Inhalation Toxicity:	Acute inhalation toxicity: LC 50 (Rat): > 5.3 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403

Mutagenicity:

Germ cell mutagenicity:
Genotoxicity in vitro:
Test Type: Ames test
Test species: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay)
Result: positive

Test species: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: positive

Test species: Chinese hamster ovary cells
Method: OECD Test Guideline 479
Result: positive

Genotoxicity in vivo:
Test Type: In vivo micronucleus test
Test species: Mouse (male and female)
Cell type: Bone marrow
Application Route: Intraperitoneal
Method: OECD Test Guideline 474
Result: positive

Irritation:

Skin corrosion/irritation:
Result: Slightly irritating to skin

Serious eye damage/eye irritation:
Result: Irreversible effects on the eye

Sensitization:

Respiratory or skin sensitisation:
Species: Guinea pig
Assessment: Did not cause sensitisation on laboratory animals.

EPOXY RESIN MODIFIER (PART A):

Ingestion Toxicity:

EPOXY RESIN CURING AGENT:
Acute oral toxicity:
LD 50 (Rat): 2,169 mg/kg
Method: OECD Test Guideline 401

Irritation:

Skin corrosion/irritation:
Result: Irritating to skin

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

Sensitization:

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

SILICA VITREOUS (PART A):

Irritation:

Skin corrosion/irritation:
Result: Possibly irritating to skin

Section 12: Ecological Information

Ecotoxicity:

Product:

Effect of Material On Aquatic:**ALIPHATIC AMINE:**

Toxicity to fish:

LD 50 (Leuciscus idus (Golden orfe)): > 1,000 mg/l

Exposure time: 96 h

Test Type: static test

Test substance: Neutralised product

Method: DIN 38412

Toxicity to daphnia and other aquatic invertebrates:

EC 50 (Water flea (Daphnia magna)): 218.16 mg/l

Exposure time: 48 h

Test Type: static test

Method: Directive 67/548/EEC, Annex V, C.2.

EPOXY RESIN CURING AGENT:

Toxicity to fish:

LC 50 (Oncorhynchus mykiss (rainbow trout)): > 180 - < 240 mg/l

Exposure time: 96 h

Test Type: static test

Toxicity to algae:

EC 50 (Desmodesmus subspicatus (green algae)): 84 mg/l

End point: Growth inhibition

Exposure time: 72 h

POLYMER (PART A):**Effect of Material On Aquatic:**

Toxicity to fish:

LC50 (Oncorhynchus mykiss (rainbow trout)): 2.7 mg/l

Exposure time: 96 h

Test Type: semi-static test

Toxicity to daphnia and other aquatic invertebrates:

EC50 (Water flea (Daphnia magna)): 2.8 mg/l

Exposure time: 48 h

Test Type: static test

Method: OECD Test Guideline 202

Toxicity to algae:

EC50 (Pseudokirchneriella subcapitata (green algae)): 4.2 mg/l

Exposure time: 72 h

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

NOEC (Water flea (Daphnia magna)): 0.3 mg/l

Exposure time: 21 d

Test Type: semi-static test

Method: OECD Test Guideline 211

METHYLPENTAMETHYLENEDIAMINE (PART B):

Effect of Material On Aquatic:

Toxicity to fish:
LC50 (Leuciscus idus (Golden orfe)): 130 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates:
EC50 (Daphnia magna (Water flea)): 50 mg/l
Exposure time: 48 h
Test Type: static test
Method: EPA-660/3-75-009
Remarks: Information given is based on data obtained from similar substances.

Toxicity to algae:
EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
Remarks: Information given is based on data obtained from similar substances.

NOEC (Pseudokirchneriella subcapitata (green algae)): 10 mg/l
Exposure time: 72 h
Test Type: static test

Method: OECD Test Guideline 201
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)): 4.16 mg/l
Exposure time: 21 d
End point: Reproduction Test
Test Type: semi-static test
Method: OECD Test Guideline 211
GLP: yes
Remarks: Information given is based on data obtained from similar substances.

Toxicity to bacteria:
EC20 (Pseudomonas putida): 30 mg/l
End point: Growth rate
Exposure time: 18 h
Test Type: Static

AROMATIC AMINE (PART B):

Effect of Material On Aquatic:

Toxicity to fish:
 LC50 (Leuciscus idus (Golden orfe)): 283.6 mg/l
 Exposure time: 48 h
 Test Type: static test

Toxicity to daphnia and other aquatic invertebrates:
 EC50 (Daphnia magna (Water flea)): 341.5 mg/l
 Exposure time: 48 h
 Test Type: static test
 Method: Directive 67/548/EEC, Annex V, C.2.

Toxicity to algae:
 EC50 (Desmodesmus subspicatus (Scenedesmus subspicatus)): 133 mg/l
 End point: Growth inhibition
 Exposure time: 72 h
 Test Type: static test
 Method: DIN 38412
 GLP: no

EPOXY RESIN MODIFIER (PART A):**Effect of Material On Aquatic:**

Ecotoxicology Assessment:
 Chronic aquatic toxicity: Harmful to aquatic life with long lasting effects.

ORGANOSILOXANE (PART A):**Effect of Material On Aquatic:**

Toxicity to fish:
 LC50 (Cyprinus carpio (Carp)): 55 mg/l
 Exposure time: 96 h
 Test Type: semi-static test

Toxicity to daphnia and other aquatic invertebrates:
 EC50 (Daphnia (water flea)): 324 mg/l
 Exposure time: 48 h
 Test Type: static test

Toxicity to algae:
 EC50 (Pseudokirchneriella subcapitata (microalgae)): 350 mg/l
 Exposure time: 96 h
 Test Type: static test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):
 NOEC (Daphnia (water flea)): 100 mg/l
 Exposure time: 21 d

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

Persistence and degradability:
 ALIPHATIC AMINE:
 Biodegradability:
 Result: Not readily biodegradable.
 Biodegradation: < 10 %
 Exposure time: 60 d
 Method: OECD Test Guideline 301B

POLYMER (PART A):

Biodegradation:

Persistence and degradability:
 Biodegradability:
 Result: Not readily biodegradable.
 Biodegradation: 5 %
 Exposure time: 28 d
 Method: OECD Test Guideline 301F

Biodegradation: 82%
 Exposure time: 28 d
 Method: Abiotic degradation

Physico-chemical removability:
 Remarks: The product can be degraded by abiotic (e.g. chemical or photolytic) processes.

METHYLPENTAMETHYLENEDIAMINE (PART B):**Biodegradation:**

Persistence and degradability:
 Biodegradability:
 Result: Readily biodegradable
 Biodegradation: 100 %
 Exposure time: 28 d
 Method: OECD Test Guideline 301D
 GLP: yes

AROMATIC AMINE (PART B):**Biodegradation:**

Persistence and degradability:
 Biodegradability:
 Inoculum: activated sludge
 Result: Readily biodegradable
 Exposure time: 18 d
 Method: OECD Test Guideline 301A
 GLP: yes

EPOXY RESIN MODIFIER (PART A):**Biodegradation:**

EPOXY RESIN CURING AGENT:
 Persistence and degradability:
 Biodegradability:
 Result: Not readily biodegradable.
 Biodegradation: 4 %
 Exposure time: 28 d
 Method: OECD Test Guideline 301D

ORGANOSILOXANE (PART A):**Biodegradation:**

Persistence and degradability:
 Biodegradability:
 aerobic
 Result: Not readily biodegradable.
 Biodegradation: 37 %
 Exposure time: 28 d
 GLP: yes

Bioaccumulative potential:**Product:****BioAccumulation:**

Bioaccumulative potential:
 AROMATIC AMINE:
 Partition coefficient: n-octanol/water:
 log Pow: -0.02 (25 deg C)
 Method: OECD Test Guideline 107

METHYLPENTAMETHYLENEDIAMINE (PART B):

BioAccumulation:

Bioaccumulative potential:
Partition coefficient: n-octanol/water:
log Pow: <= 1 (25 deg C)
pH: 9
GLP: yes

ORGANOSILOXANE (PART A):

BioAccumulation:

Bioaccumulative potential:
Partition coefficient: n-octanol/water: log Pow: Estimated 0.5 (20 deg C)

Mobility in soil:

Product:

Mobility In Environmental Media:

Mobility in soil:
Components: No data available

Other adverse effects: No data available

Product:

Additional ecological information: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Toxic to aquatic life with long lasting effects.

Section 13: Disposal Considerations

Description of waste:

Waste Disposal:

General advice:
The product should not be allowed to enter drains, water courses or the soil.
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:
 ID NUMBER: UN 3267
 PROPER SHIPPING NAME: Corrosive liquid, basic, organic, n.o.s. (2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL, ALIPHATIC AMINE)
 *HAZARD CLASS: 8
 PACKING GROUP: III
 MARINE POLLUTANT/LTD. QTY.: LIMITED QUANTITY

U.S. DOT - RAIL:
 ID NUMBER: UN 3267
 PROPER SHIPPING NAME: Corrosive liquid, basic, organic, n.o.s. (2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL, ALIPHATIC AMINE)
 *HAZARD CLASS: 8
 PACKING GROUP: III
 MARINE POLLUTANT/LTD. QTY.: LIMITED QUANTITY

U.S. DOT - INLAND WATERWAYS:
 ID NUMBER: UN 3267
 PROPER SHIPPING NAME: Corrosive liquid, basic, organic, n.o.s. (2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL, ALIPHATIC AMINE)
 *HAZARD CLASS: 8
 PACKING GROUP: III
 MARINE POLLUTANT/LTD. QTY.: LIMITED QUANTITY

IMDG: INTERNATIONAL MARITIME DANGEROUS GOODS:
IMDG Shipping Name: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL, ALIPHATIC AMINE)
IMDG UN Number: UN 3267
IMDG Hazard Class: 8
IMDG Packing Group: III
IMDG Other: MARINE POLLUTANT/LTD. QTY.:
 MARINE POLLUTANT: (BISPHENOL A-EPICHLOROHYDRIN POLYMER)LIMITED QUANTITY

IATA Other: INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO:
 ID NUMBER: UN 3267
 PROPER SHIPPING NAME: Corrosive liquid, basic, organic, n.o.s. (2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL, ALIPHATIC AMINE)
 *HAZARD CLASS: 8
 PACKING GROUP: III
 MARINE POLLUTANT/LTD. QTY.: LIMITED QUANTITY

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER:
 ID NUMBER: UN 3267
 PROPER SHIPPING NAME: Corrosive liquid, basic, organic, n.o.s. (2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL, ALIPHATIC AMINE)
 *HAZARD CLASS: 8
 PACKING GROUP: III
 MARINE POLLUTANT/LTD. QTY.: LIMITED QUANTITY

Canada Other:

TRANSPORT CANADA - ROAD:
 ID NUMBER: UN 3267
 PROPER SHIPPING NAME: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL, ALIPHATIC AMINE)
 *HAZARD CLASS: 8
 PACKING GROUP: III
 MARINE POLLUTANT/LTD. QTY.: LIMITED QUANTITY

TRANSPORT CANADA - RAIL:
 ID NUMBER: UN 3267
 PROPER SHIPPING NAME: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL, ALIPHATIC AMINE)
 *HAZARD CLASS: 8
 PACKING GROUP: III
 MARINE POLLUTANT/LTD. QTY.: LIMITED QUANTITY

TRANSPORT CANADA - INLAND WATERWAYS:
 ID NUMBER: UN 3267
 PROPER SHIPPING NAME: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL, ALIPHATIC AMINE)
 *HAZARD CLASS: 8
 PACKING GROUP: III
 MARINE POLLUTANT/LTD. QTY.: LIMITED QUANTITY

Notes from Section 14:

MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES:
 ID NUMBER: UN 3267
 PROPER SHIPPING NAME: LIQUIDO CORROSIVO, BASICO, ORGANICO, N.E.P. (2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL, ALIPHATIC AMINE)
 *HAZARD CLASS: 8
 PACKING GROUP: III

*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Marine pollutant: Yes

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:

Notes 1:

PART A:

Section 312 Hazard Category:

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

Section 313 Toxic Release Form:

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.

State:

California Prop 65:
 WARNING! This product contains a chemical known to the State of California to cause cancer.
 CARBON BLACK; 1333-86-4
 CRISTOBALITE; 14464-46-1
 EPICHLOROHYDRIN; 106-89-8

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
 METHANOL; 67-56-1
 EPICHLOROHYDRIN; 106-89-8

Notes 1:

PART B:

Section 312 Hazard Category:

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

Section 313 Toxic Release Form:

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.

State:

California Prop 65:
 WARNING! This product contains a chemical known to the State of California to cause cancer.
 CRISTOBALITE; 14464-46-1

TSCA 8(b): Inventory Status:

On TSCA Inventory

Canada NDSL:

This product contains the following components listed on the Canadian NDSL.

Canada DSL:

All other components are on the Canadian DSL.

Australia Chemical Inventory**Status:**

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

Japan Chemical Inventory Status:

ENCS: Exempt

Korean Chemical Inventory Status:

KECL: Not in compliance with the inventory

Philippines Chemical Inventory**Status:**

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

International Chemical Inventory**Lists:**

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

Regulatory Paragraph:

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

Registration: Trade Secret

Chemical Name: POLYMER
Identification number: 800986-5211P

Chemical Name: ALIPHATIC AMINE
Identification number: 254504001-5601

Chemical Name: EPOXY RESIN MODIFIER
Identification number: 800986-5520P

Chemical Name: EPOXY RESIN CURING AGENT
Identification number: 800986-5577P

Chemical Name: AROMATIC AMINE
Identification number: 800986-5525P

Chemical Name: ORGANOSILOXANE
Identification number: 800986-5522P

Section 16: Additional Information

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Other Information:

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