# Elastochem Specialty Chemicals Inc. Elastochem-PU9511 Part A

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#### Section 1: IDENTIFICATION

GSH Product Identifier: Elastochem - PU9511 Part A

Other means of Identification: Polyurethane

Relevant Identified uses of the substance or mixture and uses advised

against

Product Use: Coating

Area of Application: Industrial or residential applications Supplier/Manufacturer: Elastochem Specialty Chemicals Inc.

37 Easton Road

Brantford, Ontario N3P 1J4

Phone (519) 754-1678 Fax (519) 754-4487

Emergency Telephone #: Chemtrec Emergency Number: 800-424-9300

#### Section 2: Hazard Identification

#### GHS Classification:

Skin Irritation - Category 2 Skin Sensitization - Category 1 Acute Toxicity Inhalation - Category 4 Respiratory Sensitization - Category 1 Specific Target Organ Toxicity Single Exposure - Category 3 Specific Target Organ Toxicity Repeated Exposure - Category 2

#### GHS label elements

### Hazard Pictograms:



Signal word: Danger

Hazard statements: Causes skin irritation. Causes eye irritation.

May cause an allergic skin reaction. Harmful if inhaled.

May cause allergy or asthma symptoms or breathing

difficulties if inhaled.

May cause respiratory irritation.

May cause damage to respiratory system through prolonged or

repeated exposure by inhalation.

Precautionary statements: Avoid breathing mist, gas, vapors or spray. Do not eat, drink or smoke when using this product. Wear protective gloves, eye protection and face protection. Wash skin and face thoroughly after handling. Use only outdoors or in a well-ventilated area.

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## Section 3: Composition/information on ingredients

#### Hazardous Components

Chemical Name	Cas Number	Concentration
Methylene Diphenyl	101-68-8	40%-70%
Diisocyanate (MDI)		
Prepolymer of MDI and	Not	10%-30%
polyether polyol	available	

#### Section 4: FIRST AID MEASURES

## Description of necessary first aid measures

**Skin:** Clean exposed area with soap and lukewarm water for 15 minutes. Remove contaminated clothing. Seek medical attention if irritation or rash occurs. Wash contaminated clothes before re-use.

**Eyes:** Immediately flush thoroughly with water for at least 15 minutes lifting eye lids occasionally. Get medical attention if irritation persists.

**Inhalation:** If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

Ingestion: Do Not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Wash mouth out with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Seek medical attention immediately.

## Most important symptoms/effects, acute and delayed Potential acute & delayed health effects

<u>Inhalation:</u> Respiratory tract irritation, difficulty breathing or asthmatic reaction. High aerosol concentrations could cause inflammation of the lung tissue (chemical pneumonitis, chemical bronchitis with severe asthma like wheezing, severe coughing spasms and accumulation of fluid in the lungs, which could prove fatal. Eye Contact: Irritation of the eye tissue.

<u>Skin Contact</u>: Tingling, irritation or redness of the skin. Repeated skin contact with this material may cause skin sensitization in humans. Further skin contact may result in inflammation, rash, itching and staining.

<u>Ingestion:</u> Swallowing is expected to cause drowsiness and dizziness, weakness, nausea and vomiting. Causes irritation of the tissues of the mouth, throat and digestive tract. Onset of symptoms may be delayed.

#### Section 5: FIRE FIGHTING MEASURES

Means of Extinction: Suitable extinguishing media: Dry chemical, Carbon dioxide (CO2), alcohol resistant foam, water spray for large fires. Exercise caution when using water since the reaction between water and hot isocyanate can be vigorous and will generate carbon dioxide gas.

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Specific hazards arising from the chemical: During a fire, products of combustion may include toxic hydrogen cyanide, isocyanate vapour, oxides of carbon and nitrogen, dense smoke and irritating or toxic fumes. Reacts vigorously with water at high temperatures. Closed containers may rupture violently when heated or contaminated with water.

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

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk without suitable training. Fire fighters should wear appropriate protective equipment and self contained breathing apparatus. Avoid contact with product. Decontaminate equipment and protective clothing prior to reuse. Prevent fire extinguishing water from contaminating surface water or the ground water system.

#### Section 6: ACCIDENTAL RELEASE MEASURES

#### Spill Procedure:

Clean up personnel must wear protective equipment to prevent contact with the product. Evacuate the area of all unnecessary personnel. Stop spill at source. Ventilate and remove ignition sources. Control the source of the leak. Contain the released material by damming, diking, retaining, or diverting into an appropriate containment area. Absorb or pump off as much of the spilled material as possible. When using absorbent, completely cover the spill area with suitable absorbent material (e.g., vermiculite, kitty litter, Oil-Dri®, etc...). Allow for the absorbent material to absorb the spilled liquid. Shovel the absorbent material into an approved metal container (i.e., 55-gallon salvage drum). Do not fill the container more than 2/3 full to allow for expansion, and do not tighten the lid on the container. Repeat application of absorbent material until all liquid has been removed from the surface.

Decontaminate the spill surface area using a neutralization solution (see list of solutions on the SDS); scrubbing the surface with a broom or brush helps the decontamination solution to penetrate into porous surfaces. Wait at least 15 minutes after first application of the neutralization solution. Cover the area with absorbent material and shovel this into an approved metal container.

Decontaminate the spill surface area using a neutralization solution (see list of solutions on the SDS); scrubbing the surface with a broom or brush helps the decontamination solution to penetrate into porous surfaces. Wait at least 15 minutes after first application of the neutralization solution. Cover the area with absorbent material and shovel this into an approved metal container.

Apply lid loosely to metal waste container (do not tighten the lid because carbon dioxide gas and heat can be generated from the neutralization process). With the lid still loosely in place, move the container to an isolated, well-ventilated area to allow release of

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carbon dioxide. After 72 hours, seal the container, and properly dispose of the waste material and any contaminated equipment (i.e., broom or brush) in accordance with existing federal, provincial and local regulations.

Neutralization solutions include:

-Easy Off Grill and Oven Cleaner or Easy Off Fume Free oven cleaner -A mixture of 90% Fantastic Heavy Duty All Purpose Cleaner and 10% household ammonia.

It may take 2 or more applications of the neutralization solution to decontaminate the surface.

## Personal Precautions, protective equipment and emergency procedures:

Wear suitable protection clothing, gloves, eye/face protection and respirator when handling this product. Ventilate the area.

**Environmental precautions:** Should not be released into the environment. Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

## Methods and material for containment and cleaning up:

Suitable material for taking up: inert absorbing material, e.g., vermiculite, kitty litter, Oil-Dri®, etc. Pick up and transfer to properly labelled containers. Ventilate the area.

Section 7: HANDLING AND STORAGE

#### Precautions for safe handling:

#### Protective Measures:

Put on appropriate personal protective equipment. Do not handle until all safety precautions have been read and understood. Avoid contact with skin and eyes, inhalation of vapours and mists. Use only with adequate ventilation to keep airborne isocyanate levels below the exposure limits. Wear appropriate respirator when handling product including if material is heated, sprayed, used in a confined space, or if the exposure limit is exceeded. Warning properties (irritation of the eyes, nose and throat or odor) are not adequate to prevent overexposure from inhalation. This material can produce asthmatic sensitization upon either single inhalation exposure to a relatively high concentration or upon repeated inhalation exposures to lower concentrations. Individuals with lung or breathing problems or prior allergic reactions to isocyanates must not be exposed to vapor or spray mist. Do not breathe smoke and gases created by overheating or burning this material. Decomposition products can be highly toxic and irritating. Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected. Keep in the original container and keep tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

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#### Advice on general occupational hygiene:

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored, and processed. Workers should wash hands before, eating, drinking or smoking. Remove contaminated clothing and protective equipment before entering eating areas.

## Conditions for safe storage, including any incompatibilities:

Store product in accordance with local regulation. Store product at room temperature away from heat and moisture. Store product in original container protected from direct sunlight in a dry, cool, and well ventilated area with local exhaust. Keep away from incompatible materials and food and drink. Keep container tightly closed and sealed until ready for use.

#### Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTIONS

#### Control Parameters

Component	Cas Number	ACGIH	OSHA PEL	TWA
Methylene diphenyl	101-68-8	0.051mg/m³	0.2mg/m³	0.005ppm
diisocyanate (MDI)		(0.005ppm)	(0.02ppm)	

#### Appropriate Engineering Controls

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapour, etc) below recommended exposure limits. Handle in accordance with good industrial hygiene and safety practice.

#### Individual Protection Measures

Eye Protection: When directly handling liquid product, eye protection is required, such as chemical safety goggles or chemical safety goggles in combination with a full face shield when there is a greater risk of splash.

Protection for skin: Avoid all skin contact. Depending on the conditions of use, cover as much of the exposed skin area as possible with appropriate clothing to prevent skin contact. Animal tests and other research indicate that skin contact with MDI can play a role in causing isocyanate sensitization and respiratory reaction. This data reinforces the need to prevent direct skin contact with isocyanate.

Protection for hands: Gloves should be worn. Nitrile rubber showed excellent resistance, butyl rubber, neoprene and PVB are also effective.

## Respiratory Protection

Airborne MDI concentrations greater than the ACGIH TLV-TWA (TLV) or OSHA PEL-C (PEL) can occur in inadequately ventilated environments when MDI is sprayed, aerosolized, or heated. In such cases, respiratory protection must be worn. The type of respiratory protection selected must comply with the requirements set forth in OSHA's Respiratory Protection Standard (29 CFR 1910.134).

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Hygiene Measures: Wash hands, forearms and face thoroughly after handling chemical products.

#### Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance & Colour: Dark Amber	Vapour Pressure:
Liquid	<10-4 mmHg @ 40°C
Physical State: Liquid	Vapour Density: <8.5 approximate
	(air = 1)
Odour: Slight musty ordour	Relative Density:
	1.14 @ 25°C (water = 1)
Odour Threshold: 4mg/m³ for MDI	Solubility in water:
	Insoluble - Reacts slowly with
	water to liberate CO2 gas
pH: Not available	Partition coefficient: Not
	available
Melting Point/Freezing Point: Not	Auto Ignition Temp: Not available
available	
Initial Boiling Point:	Decomposition Temp: Not available
>300°C (572°F)	
Flash Point:	Dynamic Viscosity:
170°C (338°F)	Not available
Evaporation Rate: Not available	Specific Gravity:
	1.22g/ml
Lower Flammable Limit: Not available	Explosive Properties: Not
	available
Upper Flammable Limit: Not available	

#### Section 10: STABILITY AND REACTIVITY

Chemical Stability: This is a stable material at room temperature. Possibility of Hazardous Reactions: Contact with moisture, other materials that react with isocyanates, or temperatures above 350°F(177°), may cause polymerization.

Conditions to avoid: Avoid high temperatures, heat and freezing. Incompatibility (Materials to avoid): avoid water, amines, strong bases, acids, alcohols, copper alloys.

Hazardous decomposition Products: By thermal decomposition and combustion, product may generate nitrogen oxide, hydrogen cyanide and isocyanate vapours.

## Section 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects

#### Toxicological Information of the mixture:

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## Acute Oral Toxicity:

Ingredient	LD50 Oral	LD50 Dermal	LC50 Inhalation
Methylene	2200mg/kg	>1000 mg/kg	490mg/m³/4 hours
diphenyl	(mouse)	(rabbit)	(rat)
diisocyanate MDI			

#### Acute Health Hazards:

<u>Inhalation:</u> Data not available for the mixture. MDI has a very low vapour pressure and it is difficult to achieve vapour concentrations necessary for inhalation toxicity testing. Mice exposed to MDI aerosols varying from 7 to  $59 \text{ mg/m}^3$  for 4 hours demonstrated a decline in respiratory rate which was determined to be due mainly to MDI's action as a pulmonary irritant. The RD50 (concentration to reduce the respiratory rate by 50%) was  $32 \text{ mg/m}^3$ .

Some people may become sensitized to MDI, causing allergy or asthma symptoms or breathing difficulties if inhaled.

<u>Skin:</u> Data not available for the mixture. MDI can cause mild irritation. Isocyanates, in general, can cause skin discolouration and hardening of the skin after repeated exposures. Skin Sensitization, resulting in dermatitis, may occur in some individuals. Cured material may be difficult to remove from the skin.

 $\underline{\text{Eye:}}$  Data not available for the mixture. MDI, liquid, vapours, and aerosols, can cause eye irritation in humans.

<u>Ingestion:</u> Animal studies indicate that ingested MDI has low toxicity. Swallowing may result in irritation and corrosion of the mouth, throat and digestive tract.

Aspiration Hazard: Data not available

#### Sensitization: Respiratory and/or skin

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Isocyanates are known to cause skin and respiratory sensitization in humans. Animal test have indicated that respiratory sensitization can result from skin contact with diisocyanates. Respiratory sensitization can develop in people working with MDI. Sensitized individuals react to very low levels of MDI that have no effect on unsensitized people. Symptoms may initially appear to be a cold or mild hay fever; severe asthmatic symptoms can develop and include wheezing, chest tightness, shortness of breath, difficulty breathing and/or coughing. Fever, chills, general feelings of discomfort, headache and fatigue can also occur. Symptoms may occur immediately upon exposure or may be delayed. Sensitized people who continue to work with MDI may develop symptoms sooner after each exposure. The number and severity of symptoms may increase. MDI and other isocyanates may also cause hypersensitivity

<u>Mutagenicity:</u> Not suspected to be mutagenic. Overall, test assessing the mutagenic potential of MDI in vitro and in vivo provide no convincing evidence of mutagenic and genotoxic activity.

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#### Carcinogenicity:

Polymeric MDI has been classified as IARC Group 3 ("Not classifiable as to its carcinogenicity to humans") (1999) indicating there is inadequate evidence available to describe the carcinogenic potential. Epidemiological studies found no association between isocyanates and cancer. In chronic exposure studies in rodents, pMDI produced tumors only at the highest exposure level of 6 mg/m3. This exposure level is significantly above the TLV for MDI (0.051 mg/m3). Based on the weight of the evidence, a determination of not classified for carcinogenicity is justified.

Developmental Toxicity/Teratogenicity: Data not available

#### Section 12: ECOLOGICAL INFORMATION

## Ecotoxicity effects:

Data for MDI: LC50, fish (96 hour)>1000 mg/L

EC50 Daphnia magna (48 hour)>1000 mg/L

Biodegradation: Not readily biodegradable

Bioaccumulative Potential: Data not available

Mobility in Soil: Data not available

Other adverse effects: Data not available

#### Section 13: DISPOSAL CONSIDERATIONS

#### Disposal Procedure:

Comply with Federal, provincial, and local regulations on reporting releases.

Consult your local or regional authorities.

#### Section 14: TRANSPORT INFORMATION

TDG (TRANSPORATION OF DANGEROUS GOODS) CLASSIFICATION: Not regulated

Class: Not regulated

Environmental Hazards: Not available
Special Precautions: Not available

#### Section 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

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Section 16: OTHER INFORMATION

References: Canadian Guide of the Law and Regulations of the

Transportation of Dangerous Goods. Controlled products regulations.

Manufacturer's Safety Data Sheet.

Regulatory Affairs Department: 519-754-1678

DATE: March 7, 2019 REVISION 3

PREPARED BY: Regulatory Affairs group,

Elastochem Specialty Chemicals Inc.

# Elastochem Specialty Chemicals Inc. Elastochem- PU9511 Part B

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#### Section 1: IDENTIFICATION

GSH Product Identifier: Elastochem - PU9511 Part B

Other means of Identification: None

Relevant Identified uses of the substance or mixture and uses advised

against

Product Use: Polyurethane Resin
Area of Application: Industrial applications

Supplier/Manufacturer: Elastochem Specialty Chemicals Inc.

37 Easton Road

Brantford, Ontario N3P 1J4

Phone (519) 754-1678 Fax (519) 754-4487

Emergency Telephone #: Chemtrec Emergency Number: 800-424-9300

## Section 2: Hazard Identification

#### Classification of the substance or mixture:

Acute Toxicity: Oral Category 4

Skin Corrosion/irritation - Category 1B

Serious Eye Damage/Eye Irritation - Category 1

Aquatic Hazard (Acute) - Category 3
Aquatic Hazard (Long Term) - Category 3

Specific target organ toxicity - repeated exposure - Category 2

(Pancreas)

#### GHS label elements

#### Hazard Pictograms:







Signal word: Danger

Hazard Statements: Harmful if swallowed.

Harmful if in contact with skin. Causes severe burns and eye damage.

Harmful to aquatic life with long lasting effects.

May cause damage to organs (Pancreas) through

prolonged or repeated exposure.

Inhalation, skin absorption, or ingestion may cause

methemoglobin formation resulting in a reduced ability of the blood to carry oxygen; a symptom of

this may be cyanosis.

#### Precautionary statements:

Prevention: Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke with using this product. Wear

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protective gloves, protective clothing, eye protection, face protection.

## Section 3: Composition/information on ingredients

Substance/mixture: Mixture

Other means of identification: Not available

Ingredient Name	Concentration	Identification Number
Polyoxypropylenediamine	60%-100%	9046-10-0
Diethyltoluene diamine	10%-30%	68479-98-1
Trichloropropyl	5%-10%	13674-84-5
Phosphate		

#### Section 4: FIRST AID MEASURES

#### Description of necessary first aid measures

**Skin:** Clean exposed area with soap and warm water. Continue to rinse for at least 10 minutes. Remove contaminated clothing. Wash clothes before reuse. Seek medical attention immediately. Chemical burns must be treated promptly by a physician.

**Eyes:** Immediately flush thoroughly with water for at least 15 minutes lifting eye lids occasionally. Seek medical attention immediately. Chemical burns must be treated promptly by a physician.

**Inhalation:** Remove victim to fresh air; give artificial respiration if not breathing. Seek medical attention immediately.

**Ingestion:** Wash mouth out with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Do not induce vomiting. Seek medical attention immediately.

#### Most important symptoms/effects, acute and delayed

## Potential acute health effects

Skin contact: Causes severe burns.

Eye Contact: Causes serious eye damage.

Inhalation: May be harmful by inhalation. Irritating to mucous

membranes. Irritating to respiratory system.

Ingestion: Harmful if swallowed. May cause burns to mouth, throat and

stomach.

## Over exposure signs/symptoms

Skin Contact: Adverse symptoms; pain or irritation, redness, blistering

Eye Contact: Adverse symptoms; pain, watering, redness

Inhalation: No specific data

Ingestion: Adverse symptoms; stomach pains

## Delayed and Immediate effects and also chronic effects from short and

#### long term exposure

Short Term Exposure: Not available Long Term Exposure: Not available

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Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Following severe exposure medical follow up should be monitored for at least 48 hours.

Specific Treatments: None

Protection of first aiders: No action shall be taken involving any personal risk or without suitable training. Use personal protective equipment. Avoid contact with skin, eyes and clothing.

#### Section 5: FIRE FIGHTING MEASURES

Means of Extinction: Use extinguishing agent suitable for the surrounding fire. Suitable extinguishing media: Use dry chemical, Water Fog, Carbon Dioxide, or foam.

Specific hazards arising from the chemical: In a fire or if heated, a pressure increase will ocur and the container may burst.

Hazardous combustion products: carbon dioxide, carbon monoxide, nitrogen oxides.

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

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk without suitable training. Fire fighters should wear appropriate protective equipment and self contained breathing apparatus with a full face piece operated in positive pressure mode. Move undamaged containers from immediate hazard area if it can be done safely.

## Section 6: ACCIDENTAL RELEASE MEASURES

#### Spill Procedure:

Clean up personnel must wear protective equipment to prevent contact with the product. Evacuate the area of all unnecessary personnel. Stop spill at source. Use inert absorbent material such as sand, clay, earth or floor absorbent to clean up spill. Shovel into drums.

Personal Precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Wear personal protection equipment. Remove persons to safety.

## Methods and material for containment and cleaning up:

Suitable material for taking up: Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Wash with plenty of water.

## Section 7: HANDLING AND STORAGE

#### Precautions for safe handling:

#### Protective Measures:

Put on appropriate personal protective equipment. Do not handle until all safety precautions have been read and understood. Avoid contact

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with skin and eyes, inhalation of vapours and mists. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container and keep tightly closed when not in use.

#### Advice on general occupational hygiene:

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored, and processed. Workers should wash hands before, eating, drinking or smoking. Remove contaminated clothing and protective equipment before entering eating areas.

## Conditions for safe storage, including any incompatibilities:

Store product in accordance with local regulation. Store product at room temperature away from heat and moisture. Store product in original container in a dry, cool, and well ventilated area with local exhaust. Keep away from incompatible materials and food and drink. Keep container tightly closed and sealed until ready for use.

#### Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTIONS

#### Appropriate Engineering Controls

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapour, etc) below recommended exposure limits. Handle in accordance with good industrial hygiene and safety practice.

#### Individual Protection Measures

**Eye Protection:** Eye protection including chemical splash goggles and/or face shield. If inhalation hazards exist, a full face respirator may be required.

Protection for skin: Personal protective equipment for the body should be selected based on the task being performed and the risks involved. Protection for hands: Chemical resistant, impervious gloves complying with an approved standard should be worn at all times when handling this product.

Respiratory Protection: Use a properly fitted, air purifying respirator complying with an approved standard. Respirator selection must be based on known exposure levels and the hazards of the product.

**Hygiene Measures:** Wash hands, forearms and face thoroughly after handling chemical products.

#### Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance & Colour: Clear Liquid	Vapour Pressure: Not available
Physical State: Liquid	Vapour Density: Not available
Odour: Amine Odour	Relative Density: Not available
Odour Threshold: Not available	Solubility in water: Slightly Soluble
pH: Not available	Partition coefficient: Not available

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Melting Point/Freezing Point:	Auto Ignition Temp: Not available
Not available	
Initial Boiling Point: Not available	Decomposition Temp: Not available
Flash Point: Closed cup: Not	Viscosity: Not available
available	
Evaporation Rate: Not available	Specific Gravity: 1.02g/mL
Lower Flammable Limit: Not available	Explosive Properties: Not
	available
Upper Flammable Limit: Not available	

#### Section 10: STABILITY AND REACTIVITY

Chemical Stability: This is a stable material at room temperature.

Possibility of Hazardous Reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid: Avoid all possible sources of ignition (spark or flame).

Incompatibility (Materials to avoid): Strong oxidizing agents and isocyanates.

**Hazardous decomposition Products:** Carbon monoxide Carbon dioxide (CO2) nitrogen oxide.

#### Section 11: TOXICOLOGICAL INFORMATION

## Information on toxicological effects

Toxicological Information of the ingredients:

Ingredient Name	LD50 Oral	LD50 Dermal
Polyoxypropylenediamine	480 mg/kg (Rat)	2090 mg/kg (Rabbit)
Diethyltoluenediamine	738mg/kg (rat)	> 2000 mg/kg (rat)

Irritation/Corrosion: Corrosive to the eyes and skin.

Sensitization: No information available Mutagenicity: No information available Carcinogenicity: No information available

Reproductive Toxicity: No information available

Teratogenicity: No information available

Specific Organ Toxicity (single exposure): No information available Specific Organ Toxicity (repeated exposure): No information available

#### Section 12: ECOLOGICAL INFORMATION

#### Ecotoxicity:

There is no known ecological information for this product.

Ingredient Name	Test	Endpoint	Exposure	Species	Results
Polyoxyproplenediamine	-	Acute EC50	48 hours	Daphnia	15 mg/l
	_	Acute IC50	72 hours	Algae	135 mg/l
	_	Acute LC50	96 hours	Fish	>100 mg/l

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Ingredient Name	Acute Toxicity	Acute Toxicity	Toxicity to
	to Fish	to Aquatic	Microorganisms
		Invertebrates	
Diethyltoluenediamine	LC50:	EC50: ~0.5mg/l	EC10: 170mg/l
(DETDA)	~194mg/l(Golden	(Water flea	Pseudomonas
	orfe (Leuciscus	(Daphnia magna),	putida, 24 h)
	idus), 48 h)	48 h)	

Persistence and Degradability: Not available

Bioaccumulative Potential: Not available

Mobility in Soil: Not available

Other adverse effects: Not available

#### Section 13: DISPOSAL CONSIDERATIONS

#### Disposal Procedure:

Comply with Federal, provincial, and local regulations on reporting releases.

Consult your local or regional authorities.

#### Section 14: TRANSPORT INFORMATION

TDG (TRANSPORATION OF DANGEROUS GOODS) CLASSIFICATION: UN2735 Class: 8 Packing Group: II

Special Precautions: Not available

#### Section 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

#### Section 16: OTHER INFORMATION

References: Canadian Guide of the Law and Regulations of the

Transportation of Dangerous Goods. Controlled products regulations.

Manufacturer's Safety Data Sheet.

Regulatory Affairs Department: 519-754-1678

DATE: March 8, 2019 REVISION 2

PREPARED BY: Regulatory Affairs group,

Elastochem Specialty Chemicals Inc.