

## Section 1. Product and Company Identification

Product Name	<b>PRECIDIUM™ MTI 850D-FR Membrane Resin</b> PRECIDIUM™ brand name is a trademark of Quantum Chemical, and is being used with permission.
Manufacturer	Quantum Technical Services Ltd. (Dba Quantum Chemical) 15 Riel Drive St. Albert, AB, Canada T8N 3Z2 Tel: (780) 458-3355 (non-emergency phone number) Fax: (780) 458-2852 <a href="http://www.quantumchemical.com">www.quantumchemical.com</a>
Chemical Emergencies	For 24-Hour Emergency call Canutec at 613.996.6666

## Section 2. Hazards Identification

### 2.1 Classification

**OSHA Regulatory Status:** This material is considered hazardous by the 2012 OSHA Hazard Communication Standard (CFR 1910.1200)

Eye Damage Irritant	Category 1
Skin Corrosion/Irritation	Category 1B
Acute Toxicity (oral)	Category 4
Acute Toxicity (Dermal)	Category 4
Reproductive Toxicity	Category 1B
Acute Aquatic Toxicity	Category 2
Chronic Aquatic Toxicity	Category 1

### 2.2 Label Elements:

#### Pictogram:



#### Signal Word:

#### Hazard Statements:

#### Danger

- H301** Toxic if swallowed.
- H312** Harmful in contact with skin.
- H319** Causes serious eye irritation.
- H332** Harmful if inhaled.
- H360** May damage fertility or the unborn child.
- H372** May cause damage to organs through prolonged or repeated exposure.
- H410** Very toxic to aquatic life with long lasting effects.
- H290** May be corrosive to metals.

<b>Precautionary Statements:</b>	<b>P202</b>	Do not handle until all safety precautions have been read and understood.
	<b>P264</b>	Wash face, hands and any exposed skin thoroughly after handling.
	<b>P270</b>	Do not eat, drink, or smoke when using this product.
	<b>P280</b>	Wear protective gloves/protective clothing/eye protection/face protection.
	<b>P260</b>	Do not breathe dust/fume/gas/mist/vapors/spray.
	<b>P284</b>	[In case of inadequate ventilation] wear respiratory protection.
	<b>P273</b>	Avoid release to the environment.
<b>Response:</b>	<b>P314</b>	Get medical advice/attention if you feel unwell.
	<b>P305 + P351 + P338 + P313</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Get medical advice/attention.
	<b>P302 + P350</b>	IF ON SKIN: Gently wash with plenty of soap and water.
	<b>P332 + P313</b>	If skin irritation occurs: Get medical advice/attention.
	<b>P304 + P340</b>	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
	<b>S64/ P301 + P310 + P331</b>	IF SWALLOWED: Rinse mouth with water (only if person is conscious). Drink plenty of water. Do NOT induce vomiting. Immediately call a POISON CENTRE/doctor.
<b>Storage:</b>	<b>P233</b>	Keep container tightly closed.
<b>Disposal:</b>	<b>P501</b>	Dispose of contents/containers in accordance with local /regional/national international regulations.

### Section 3. Composition and Ingredient Information

Hazardous Ingredients	%	T.L.V.	C.A.S. #	LD/50,	Route, Species
Poly (oxy(methyl-1,2-Ethanediy)), alpha-(2-Aminomethylethyl)omega- (2-aminomethylethoxy) –diamine	15-40	N/D	9046-10-0	480mg/Kg	oral, rat
Diethylmethylbenzenediamine	7-13		68479-98-1	738 mg/kg	oral, rat
Boric Acid, Zinc Salt	7-13		1332-07-6		
4,4'-methylenebis[N-sec-butylaniline]	10-30		5285-60-9		
Ammonium Polyphosphate	15-40	N/A	68333-79-9		

Note: Composition ranges are given to protect proprietary information.

### Section 4. First Aid Measures

Eye Contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Obtain immediate medical attention.
Skin Contact	In case of contact, immediately flush skin with plenty of soap and water. Remove contaminated clothing. Wash clothing before reuse. Obtain immediate medical attention.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical attention.
Ingestion	If ingested, rinse out mouth; dilute with water. Consult a physician. <b>Do not induce vomiting.</b> Never give anything by mouth to an unconscious person.

## Section 5. Fire Fighting Measures

Flash Point	234°C (CC)
Auto Ignition Temperature (C)	330°C
Upper Explosive Limit	Not available.
Lower Explosive Limit	Not available.
Extinguishing Media	Water fog. Use flooding amounts of water in early stages of fire.
Unusual hazards	Not applicable.
Sensitivity to Mechanical Impact	Not expected to be sensitive to mechanical impact.
Sensitivity to Static Discharge	Not expected to be sensitive to static discharge.
Special Fire Fighting Procedures	Cool fire-exposed containers with water spray. Heat will cause pressure buildup and may cause explosive rupture. Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.

## Section 6. Accidental Release Measures

Leak/Spill	Spills should be contained, solidified, and placed in suitable containers for disposal in a licensed facility. Wear respiratory protection and protective clothing. Provide adequate ventilation. This product is an alkaline. Before discharging sewage into treatment plants neutralization is generally required. It can be mechanically removed from water due to insolubility.
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## Section 7. Handling and Storage

Handling Procedures	Avoid skin and eye contact. Avoid breathing fumes. Remove contaminated clothing before reuse. Maintain good personal hygiene.
Storage Needs	Store in a cool and dry place, for product integrity. Store in tightly sealed container and protect from moisture and foreign materials. Keep container closed when not in use.

## Section 8. Exposure Controls and Personal Protection.

Protective equipment	
Eye/Type	Liquid chemical goggles. Contact lenses should not be worn.
Respiratory/Type	At least an air-purifying respirator equipped with an organic vapor cartridge and particulate pre-filters must be worn.
Gloves/Type	Rubber or plastic gloves. Butyl rubber gloves. Nitrile rubber; a barrier cream. Practice good hygiene; wash thoroughly before handling any food.
Clothing/Type	Wear adequate protective clothes.
Other/Type	Eyewash fountain. Emergency shower should be in close proximity.
Ventilation Requirements	Ventilate adequately.

## Section 9. Physical and Chemical Properties

Physical State	Liquid
Odor	Amine
Specific Gravity	approximately 1.3
Odor Threshold(ppm)	Not applicable

Vapor Pressure (mm Hg)	Not Available
Vapor Density (Air=1)	>1
Evaporation Rate	Non volatile
Boiling Point	Not Available
pH	Not Available
Solubility in water	Not Available
Freezing Point (°C)	Not Available

## Section 10. Stability and Reactivity

Incompatibility	Acids, isocyanates and oxidizing agents.
Reactivity Conditions	See "incompatibility".
Hazardous products of Decomposition	Carbon Monoxide/Dioxide. NOx

## Section 11. Toxicological Information

### **Poly (oxy(methyl-1,2-Ethanediy)), alpha-(2-Aminomethylethyl)omega- (2-aminomethylethoxy) –diamine**                      **9046-10-0**

Acute Toxicity	
Oral (rat)	LD50 2885 mg/kg
Dermal (rabbit)	LD50 2,980 mg/kg
Inhalation (rat)	LC50 >0.74 mg/l (8 hr, no mortality observed)
Irritation/Corrosion	
Skin (rabbit)	Corrosive
Eye (rabbit)	Risk of serious damage to the eyes
Genetic Toxicity	Not mutagenic
Carcinogenicity	No data available
Reproductive Toxicity	No evidence of fertility impairing effect
Teratogenicity	No evidence of teratogenicity

### **Diethylmethylbebnzenediamine**                      **68479-98-1**

Acute Toxicity	
Oral (rat)	LD50 738 mg/kg
Dermal (rat)	LD50 >2,000 mg/kg
Irritation/Corrosion	
Skin (rabbit)	Non Irritant
Eye (rabbit)	Irritant
Sensitization (guinea pig)	not sensitizing

### **Boric Acid, Zinc Salt**                      **1332-07-6**

Acute Toxicity	
Oral (rat)	LD50 >5,000 mg/kg
Dermal (rabbit)	LD50 >5,000 mg/kg
Irritation/Corrosion	
Eye	May cause eye irritation

**4,4'-methylenebis[N-sec-butylaniline] 5285-60-9**

## Acute Toxicity

Oral (rat)	LD50 1380 mg/kg
Dermal (rabbit)	LD50 3090 mg/kg

## Irritation/Corrosion

Skin	No
Eye	No

## Sensitization

not sensitizing

## Genetic Toxicity

No known significant effects or critical hazards

## Carcinogenicity

No known significant effects or critical hazards

## Reproductive Toxicity

No known significant effects or critical hazards

## Single Dose Toxicity

No known significant effects or critical hazards

## Repeated Dose Toxicity

No known significant effects or critical hazards

**Ammonium Polyphosphate****68333-79-9**

## Acute Toxicity

Oral	LD50 >2000 mg/kg
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**Section 12. Ecological Information****Poly (oxy(methyl-1,2-Ethanediy)),  
alpha-(2-Aminomethylethyl)omega-  
(2-aminomethylethoxy) –diamine****9046-10-0**Aquatic Toxicity:

Fish (*Oncorhynchus mykiss*) LC50 (96 hr) >15 mg/l  
 Fish (*Cyprinodon variegatus*) LC50 (96 hr) 772.14 mg/l  
 Aquatic Invertebrates (*Daphnia magna*) EC50 (48hr) 80 mg/l  
 Aquatic Plants (*Pseudokirchneriella subcapitata*) EC50 (72 hr) 15 mg/l  
 Aquatic Plants (*Skeletonema costatum*) EC50 (72 hr) 141.72 mg/l

Microrganisms/Effect on Activated Sludge:

Activated Sludge EC20 (3 hr) 380 mg/l

Persistence and Degradability

Not readily biodegradable

Bioaccumulation Potential:

No significant accumulation is expected as a result of the distribution coefficient of n-octanol/water (log Pow).

Mobility in Soil:

Adsorption to solid phase is not expected.

**Diethylmethylbenzenediamine****68479-98-1**Aquatic Toxicity:Fish (*Leuciscus idus*) LC50 (48 hr) >194 mg/l

Aquatic Invertebrates (Daphnia magna) EC50 (48hr) <1 mg/l

Microorganisms/Effect on Activated Sludge:

Bacteria (Pseudomonas putida) EC10 (16 hr) 170 mg/l

Persistence and Degradability

Not readily biodegradable

**Boric Acid, Zinc Salt** **1332-07-6**

Aquatic Toxicity:

Fish (Oncorhynchus mykiss) LC50 (96 hr) 2.7 mg/l

Aquatic Invertebrates (Daphnia magna) EC50 (48hr) 0.068 mg/l

Algae EC50 (72 hr) 0.12 mg/l

Persistence and Degradability

No data available

**4,4'-methylenebis[N-sec-butylaniline]** **5285-60-9**

Not classified as hazardous to aquatic life.

## Section 13. Disposal Considerations

Waste Disposal

In accordance with municipal, provincial and federal regulations. Empty containers must be handled with care due to product residue. Do not heat or cut empty containers with electric or gas torch.

## Section 14. Transport Information

T.D.G. Classification

Amine, liquid, corrosive, N.O.S., Class 8, UN2735, Packing Group II

## Section 15. Regulatory Information

Canadian DSL

All substances are listed.

## Section 16. Other Information

Revision Date

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Note

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