

SAFETY DATA SHEET

Quantum Technical Services Ltd.

Section 1. Product and Company Identification

Product Name	PRECIDIUM™ 4100 Polyurethane Primer Resin
Recommended Use	Protective Primer for Industrial Equipment
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 www.quantumchemical.com
Chemical Emergencies	For 24-Hour Emergency call Canutec at 613.996.6666

Section 2. Hazards Identification

2.1 GHS Classification: This material is considered hazardous by OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin Sensitizer	Category 1
Flammable Liquids	Category 2
Eye Damage/Irritation	Category 2B
Acute Toxicity, Oral	Category 4
Acute Toxicity, Dermal	Category 4
Specific Target Organ	
Toxicity (single exposure (CNS) Specific Target Organ	Category 3
Toxicity (repeated exposure (CNS) Specific Target Organ	Category 2

2.2 Label Elements:

Pictogram:



Signal Word: DANGER

Hazard Statements:	H225 Highly flammable liquid and vapour H302 Harmful if swallowed. H315 Causes skin irritation H320 Causes eye irritation H317 May cause an allergic skin reaction. H335 May cause respiratory irritation H336 May cause drowsiness or dizziness H373 May cause damage to organs through prolonged or repeated exposure. H412 Harmful to aquatic life with long lasting effects.
Precautionary Statements:	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources P233 Keep container tightly closed P240 Ground and Bond container and receiving equipment P243 Take action to prevent static discharges P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P264 Wash with plenty of soap and water thoroughly after handling. P270 Do not eat, drink, or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated clothing should not be allowed out of the workplace. P280 Wear protective gloves/protective clothing/eye protection/face protection. P273 Avoid release to the environment
Response:	P370+P378 In case of fire, use carbon dioxide, dry chemical, or foam to extinguish. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P332+P313 If skin irritation occurs: Get medical advice/attention. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P301+P311+P331 IF SWALLOWED: Call a POISON CENTER/doctor. Do NOT induce vomiting. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 If eye irritation persists: Get medical advice/attention.
Storage:	P403+P233 Store in a well-ventilated place. Keep container tightly closed. P235 Keep cool.
Disposal:	P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Section 3. Composition and Ingredient Information

Hazardous Ingredients:	%	T.L.V.	C.A.S. #	OSHA PEL
Aspartic Acid , N,N'-(methylene-4,1-cyclohexanediy)bis-1,1',4,4'-tetraethyl ester	5 - 10	N/D	136210-30-5	N/D
Poly(tetramethylene ether) glycol	5- 10		25190-06-1	
Diethylene glycol	1-5		111-46-6	
Methyl Amyl Ketone	15-40		110-43-0	
Tert Butyl Acetate	15-40		540-88-5	

Actual concentrations are withheld as a trade secret.

Section 4. First Aid Measures

Eye Contact:	Immediately flush with plenty of water for at least 15 minutes, keeping eyelids open. If redness, itching, or a burning sensation develop, seek medical attention.
Skin Contact:	If skin is damaged or wounded, treat with saturated gauze pads or compresses using a freshly made up ascorbic acid solution (10g in 100g of water). Immediately flush skin with plenty of soap and water. Remove contaminated clothing and wash clothing before reuse.
Inhalation:	Move victim to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and seek medical attention.
Ingestion:	Do not induce vomiting. Seek medical attention immediately.
Most Important Symptoms/ Effects – Acute or Delayed:	Eye Disease, skin disorders and allergies.

Section 5. Fire Fighting Measures

Suitable Extinguishing Media:	Use carbon dioxide, foam, and dry chemical Use water spray to keep fire exposed containers cool.
Unsuitable Extinguishing Media:	High volume water jet.
Unusual Fire and Explosion Hazards:	Wear protective clothing and self-contained breathing apparatus to protect against potential toxic and irritating fumes.
Hazardous Combustion Products:	Carbon dioxide and monoxide, oxides of Nitrogen, unidentified compounds.

Section 6. Accidental Release Measures

Leak/Spill:	Evacuate all non-essential personnel. Eliminate all sources of ignition. Ventilate area. Utilize recommended protective clothing. Dike area to prevent spreading. Absorb with inert material. Collect material in open containers. Remove containers to a safe place and cover loosely.
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Section 7. Handling and Storage

Handling Procedures:	Do not breathe vapors or spray mist. Avoid contact with eyes or skin, Avoid contact with clothing. Use only with adequate ventilation and personal protection. Wash hands and face thoroughly after handling and before eating and drinking.
Storage Needs:	Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of reach of children.
Incompatible Materials or Ignition Sources:	Hazardous polymerization does not occur, Avoid strong oxidizing agents, acids, isocyanates.

Section 8. Exposure Controls and Personal Protection

Exposure Limits

Tert Butyl Acetate	TWA (CA, AB, OEL)	200 ppm (950 mg/m ³)
Methyl Amyl Ketone	TWA (ACGIH)	50 ppm

No other information on exposure limits available.

Protective Equipment:

Eye/Type: Chemical tight goggles; full face shield if possibility of splashing.

Respiratory/Type: Respiratory masks should be worn at all times in the case of inadequate ventilation. A NIOSH/MSHA approved respirator with an organic vapour cartridge is acceptable.

Gloves/Type: Use neoprene or rubber gloves.

Clothing/Type: Wear adequate protective coveralls and footwear.

Other/Type: Eyewash fountain. Emergency shower should be in close proximity.

Ventilation Requirements: Ventilate adequately

Section 9. Physical and Chemical Properties

Physical State:	Liquid.
Appearance:	Clear or tinted
Odour:	Sweet & Fruity odour.
Odour Threshold:	Not Available
Specific Gravity:	0.91 @ 20°C.
Flash Point:	Not determined.
Vapor Pressure (mm Hg):	Not Determined.
Vapor Density (Air=1):	Not Applicable.
Evaporation Rate:	Not Available.
Boiling Point:	Not Available.
pH:	Not Available.
Solubility in Water:	Insoluble in water @ 68° F (20°C).
Freezing Point (°C):	Not Available.
Melting Point:	Not Available.
Percent Solids by Weight:	59.1%.
Percent Volatile (g/L):	60 by weight; 65% by volume.
VOC (g/L):	273 g/L.
Viscosity:	Not Available.
Flammability (Solid, Gas):	Highly Flammable.
Upper/Lower Explosion/ Flammability Limit:	Not Available
Partition Coefficient (n-octanol/Water):	Not Available.
Auto-ignition Temperature:	Not Available.
Decomposition Temperature:	Not Available.

Section 10. Stability and Reactivity

Stability:	Stable.
Conditions to Avoid:	Excessive heat, open flame, sparks, and strong oxidizing agents. Protect from atmospheric moisture.
Incompatibility:	Oxidizing agents/acids.
Reactivity Conditions:	Product is stable; hazardous polymerization will not occur.
Hazardous Products of Decomposition:	By fire: carbon monoxide, carbon dioxide. Nitrogen oxides. amines. ammonia, aliphatic fragments.
Conditions to Avoid:	Avoid incompatible reactants, especially strong bases, water or high temperatures.

Section 11. Toxicological Information

Likely routes of exposure:	Effects on Eye: Causes eye irritation. Effects on Skin: Causes skin irritation. Inhalation Effects: This product presents an elevated inhalation risk when used in spray or aerosol applications. Ingestion Effects: No data available. Symptoms: No data available.
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Toxicity:	No data for product itself; data given for components.
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Aspartic Acid , N,N'-(methylene-4,1-cyclohexanediyl)bis-1,1',4,4'-tetraethyl ester

C.A.S. #136210-30-5

Acute Toxicity: (Toxicity data is based on a similar product)	LD50 (Oral, Rat) >2000 mg/kg (Directive 67/548/EEC, Annex V, B.1) LC50 (Inhalation, Rat) >4.224 mg/l 4 hr OECD Guideline 403 LD50 (Dermal, Rat) >2000 mg/kg (Directive 67/548/EEC, Annex V, B.3)
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Skin Irritation:	OECD Test Guideline 404	Slight Irritant
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Toxicological Studies of a Comparable Product: Eye Irritation: OECD Test Guideline 405 (Rabbit) Skin Sensitization: OECD Test Guideline 406 (Guinea Pig) Repeated Dose Toxicity: Subacute Oral Toxicity (Rat)	Slightly Irritating Positive NOAEL > 1,000 mg/kg
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Mutagenicity (toxicological studies of a comparable product):

Genetic Toxicity in Vitro: Chromosome aberration test: negative
Salmonella/microsome test (Ames test): No indication of mutagenic effects.

Genetic Toxicity in Vivo: Micronucleus Test: negative (mouse)

Developmental Toxicity/
Teratogenicity:

(toxicological studies of a comparable product): Rat, female, Oral NOAEL (Teratogenicity): 1,000 mg./kg, NOAEL (meternal): 1,000 mg./kg

Poly(tetramethylene ether) glycol

Acute toxicity: Oral (estimate) 500 mg/kg

Diethylene glycol

Acute Toxicity: LD50 (Oral, Rat) 12565 mg/kg
 LC50 (Inhalation, Rat) 4600 mg/m³ 4 hr
 LD50 (Dermal, Rabbit) 11890 mg/kg

Methyl Amyl Ketone

Acute Toxicity: LD50 (Oral, Rat) 1670 mg/kg
 LC50 (Inhalation, Rat) >16 mg/L 4 hr
 LD50 (Dermal, Rabbit) 10300 mg/kg

Tert Butyl Acetate

Acute Inhalation Toxicity: Estimate 22 mg/l 4 hr

Aspiration Toxicity May be harmful if swallowed and enters airway

Symptoms of overexposure: headache, dizziness, tiredness, nausea and vomiting
 Concentrations substantially above the TLV value may cause narcotic effects.

Section 12. Ecological Information

No data for product itself, data given for components.

Aspartic Acid , N,N'-(methylene-4,1-cyclohexanediyl)bis-1,1',4,4'-tetraethyl ester

C.A.S. # 136210-30-5

Toxicity to Aquatic Plants: IC50 (scenedesmus subspicatus, 72 h) 113 mg/l

Ecotoxicological reports on a comparable product.

Aliphatic Amine

No environmental data has been established or is available for this product.

Cyclohexanemethanamine, 1,3,3

-trimethyl-N-(2-methylpropylidene

-5-[(2-methylpropylidene) amino] C.A.S. # 54914-37-3

Toxicity:	LC50 (Zebra Fish (Danio rerio)	96-Hour	>100 mg/l
	EC50 (Water Flea (Daphnia magna)	48-Hour	22.2 mg/l
	EC50 (Green Algae (Desmodesmus subspicatus)	72-Hour	73.6 mg/l (ECHA)

Biodegradation: Not Readily Biodegradable (< 60% after 28 days)

Bioaccumulation: High potential to bioaccumulate (Log Kow = 5.2)

Section 13. Disposal Considerations

Waste Disposal: Spilled material and water rinses are classified as chemical waste and must be disposed of in accordance with current local, municipal, provincial and federal regulations. Do not heat or cut empty containers with electric or gas torch.

Section 14. Transport Information

Proper Shipping Name: UN 1263, Paint, Flammable.

Hazard Class: Class 3, PG II

Section 15. Regulatory Information

Inventories: Canadian DSL: Not all components are listed

Section 16. Other Information

Revision Date: April 10, 2025

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