

SAFETY DATA SHEET

Ltd.

Quantum Technical Services

Section 1. Product and Company Identification

Product Name	ILLUSTRIUM 3100 ISO
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 Classification:

GHS Classification:	Acute Toxicity: Inhalation	Category 4
	Respiratory Sensitization	Category 1
	Skin Sensitization	Category 1
	Specific Target Organ Toxicity: Single Exposure [Respiratory Tract irritation]	Category 3
	Specific Target Organ Toxicity: Repeated Exposure Inhalation (Lungs)	Category 2

2.2 Label Elements:

Pictogram:



Signal Word: Danger

Emergency Overview: May cause allergic skin reaction.
May cause skin, eye, and respiratory tract irritation.
Harmful by inhalation and if swallowed.

Hazard Statements: H317 May cause an allergic skin reaction.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H373 May cause damage to organs (lungs) through prolonged or repeated exposure.

Precautionary Statements: P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection /face protection.
P285 In case of inadequate ventilation, wear respiratory protection which meets the requirements in OSHA'S Respiratory Protection Standard (29 CFR 1910.134) or regional standards.

Response:	P370+P378 In case of fire: Use water spray, 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 [or shower]. P304+P340 IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing. P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P331 Do NOT induce vomiting. P332+P313 If skin irritation occurs: Get medical advice/attention. P362+P364 Take off contaminated clothing and wash before reuse.
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
Homopolymere of HDI	60-80	N/D	28182-81-2	N/D
Hexamethylene-1,6-Diisocyanate	0.1-1	N/D	822-06-0	N/D

Note: Concentration ranges are given to protect intellectual property.

Section 4. First Aid Measures

Eye Contact:	Immediately flush with plenty of water for at least 15 minutes. If redness, itching, or burning sensation develop, seek medical attention.
Skin Contact:	Remove from skin immediately. Rinse with clean water for 20-30 minutes. Use soapy water if needed. If redness, itching, or burning sensation develop, seek medical attention.
Inhalation:	Move victim to fresh air immediately. Give oxygen and seek medical attention.
Ingestion:	Do not induce vomiting. Dilute with water and seek medical attention immediately.

Section 5. Fire Fighting Measures

Flash Point:	>200° F (93°C).
Auto Ignition Temperature (C):	N/D.
Extinguishing Media:	Foam/carbon dioxide/dry chemical/water fog.
Protective Equipment:	Safety glasses and gloves.
Unusual Hazards:	Closed containers may rupture from build-up of pressure when exposed to extreme heat.
Sensitivity to Mechanical Impact:	Not expected to be sensitive to mechanical impact.
Special Fire Fighting Procedures:	Remove all ignition sources. Wear self-contained breathing apparatus and complete personal protective equipment when entering confined areas where potential for exposure to vapors or products exist.

Section 6. Accidental Release Measures

Leak/Spill: Avoid contact with substance. All persons involved in clean-up must be wearing appropriate protective equipment. Stop the spill at source, pump liquid to salvage container. Remaining liquid may be taken up on clay, diatomaceous earth, or other absorbent. Treat with decontamination solutions: Nonionic surfactant Union Carbide's Tergitol TMN-10 (20%) and water (80%); concentrated ammonia (3-8%), detergent (2%) and water (90-95%).

Section 7. Handling and Storage

Handling Procedures: Avoid skin and eye contact. Avoid breathing fumes. Wash thoroughly before eating or drinking.

Storage Needs: Store in a cool and dry place away from ignitable sources as exothermic generation of carbon dioxide may cause dangerous pressure. Store in tightly sealed containers and protect from moisture. Re-seal partially used containers.

Section 8. Exposure Controls and Personal Protection.

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 respirator 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. Local exhaust may be required in certain instances and mechanical exhaust is usually sufficient.

Section 9. Physical and Chemical Properties

Physical State: Liquid.

Appearance: Clear/pale yellow.

Odor: Slightly musty.

Specific Gravity: 1.15 @ 25°C.

Vapor Pressure (mm Hg): Approximately 5.2×10^{-9} .

Vapor Density (Air=1): No Data.

Evaporation Rate: No Data.

Boiling Point: 382° F.

pH: No Data.

Solubility in Water: Insoluble in water @ 68° F/(20°C).

Freezing Point (°C): N/D.

Melting Point: N/D.

Percent Solids by Weight: 9.6 lb./gallon.

Percent Volatile (g/L): 0% by weight; 0% by volume.

VOC (g/L): 0% with water; 0% without water.

Viscosity: 650-750.

Section 10. Stability and Reactivity

Stability:	Stable.
Conditions to Avoid:	Excessive heat, open flame, sparks, and strong oxidizing agents. Protect from atmospheric moisture. Replace outage with inert dry nitrogen.
Incompatibility:	Water, acid, base (alkalis, ammonia), alcohols, metal compounds.
Reactivity Conditions:	See “incompatibility”.
Hazardous Products of Decomposition:	Isocyanate vapors or mist, carbon dioxide, carbon monoxide, nitrogen oxides.
Conditions to Avoid:	Avoid incompatible reactants, especially strong bases, water or temperatures over 160°C.

Section 11. Toxicological Information

Acute Oral Toxicity(LD50):	>10,000 mg/Kg (rats).
Dermal (LD50):	>5000 mg/Kg (rabbits).
Inhalation (LC50):	Lower respiratory (pulmonary) irritant. Value Range from 137-1150 MG/M3 were obtained in rats exposed to aerosols. (4H EXP.)
Severe Irritant:	Capable of inducing corneal injury (rabbit). Maximum primary eye irritant score: 54.6/110 for 24- hour skin effects: Moderate and Dermal. Primary dermal irritation score: 3.4/8.0 (rabbit).
Sensitizing Capability of Material:	Pulmonary and dermal sensitizer in animals and humans.
Carcinogenicity of Material:	Not classified as carcinogenic.
Teratogenicity:	Not available.
Mutagenicity:	Not available.
Reproductive Effects:	Not available.
Synergistic Materials:	None known.

Section 12. Ecological Information

Aquatic Toxicity:	Zebra Fish:	LC50	(96-hour)	100 mg/L
	Water Flea:	EC50	(48-hour)	100 mg/L
Persistence/Degradability:	Not readily biodegradable.			
Bioaccumulation:	Accumulation is not expected.			

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.
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Section 14. Transport Information

Proper Shipping Name:	Polyisocyanate.
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Hazard Class: Non-regulated in 55-gallon drums, NOI.

Section 15. Regulatory Information

TSCA
(Toxic Substance Control Act): If exported to the United States all chemical substances in this shipment comply with all applicable rules or orders under TSCA and there are no chemical substances in violation of TSCA or any applicable rule or order thereunder.

Section 16. Other Information

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