

Section 1. Product and Company Identification

Product Name	SafeCoat® Clear Part A Resin
Manufacturer	Quantum Technical Services Ltd. (Db a 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 Label Elements:****Pictogram:****Signal Word:** Warning**Hazard Statements:**

H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.

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.

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
P235

Store in a well-ventilated place. Keep container tightly closed.
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

<u>Hazardous Ingredients</u>	<u>%</u>	<u>T.L.V.</u>	<u>C.A.S. #</u>	<u>OSHA PEL</u>
Aspartic Ester	>40	N/D	Proprietary	N/D
Aspartic Ester	>10	N/D	Proprietary	N/D
Aldamine	> 5	N/D	54914-37-3	N/D
2-(2H-Benzotriazol-2-YL)-4,6—Di-Tert -Pentylphenol.	>1	N/D	25973-55-1	N/D
Carbon Black	0-4	N/D	1333-86-4	See Section 11

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.

Section 5. Fire Fighting Measures

Flash Point	>200 degrees F (94°C).
Auto Ignition Temperature (C)	Not applicable.
Extinguishing Media	Foam/carbon dioxide/dry chemical.
Protective Equipment	Safety glasses and gloves.
Unusual Hazards	During a fire, irritating and toxic gases and aerosols may be generated by thermal decomposition and combustion. Symptoms may not be immediately apparent. Obtain medical attention. Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.
Special Fire Fighting Procedures	Firefighters should be equipped with self-contained breathing apparatus and full protective clothing to protect against potentially toxic and irritating fumes. Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible auto-ignition or explosion when exposed to extreme heat.
Sensitivity to Mechanical Impact	Not available.
Sensitivity to Static Discharge	Take precautionary measures against static discharge.

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 skin or eyes. Use only with adequate ventilation and personal protection. Remove contaminated personal protective equipment then wash hands and face thoroughly after handling, before eating or drinking. Keep container closed when not in use. Empty containers retain product residue and can be hazardous. Do not ingest. Avoid release to environment
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.

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. See complete details above under handling instructions.

Established exposure limits for carbon black are for respirable or inhalable dust. As all carbon black content in this product is fully dispersed in liquid, in our opinion these established exposure limits are not relevant.

Section 9. Physical and Chemical Properties

Physical State	Liquid.
Appearance	White or tinted any color.
Odor	Slight.
Specific Gravity	1.09 @ 20°C.
Vapor Pressure (mm Hg)	0.000014 MMHG. @ 20°C.
Vapor Density (Air=1)	N/A
Evaporation Rate	N/A
Boiling Point	N/A
pH	N/A
Solubility in Water	Insoluble in water @ 68° F (20°C).
Freezing Point (°C)	N/A
Melting Point	N/A
Percent Solids by Weight	100%
Percent Volatile (g/l)	0% by weight; 0% by volume.
VOC (g/l)	0% with water; 0% without water.
Viscosity	N/A

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 temperatures over 160°C.

Section 11. Toxicological Information

Acute Oral Toxicity (LD50)	>2000 mg/Kg (rats).
Irritancy of Material	Slight to moderate.
Sensitizing Capability of Material	May cause sensitization by skin contact.
Carcinogenicity of Material	Negative; see note for Carbon Black.
Teratogenicity	N/A
Mutagenicity	Negative.
Reproductive Effects	N/A

Carcinogenicity of Carbon Black.

In 2006 IARC (International Agency for Research on Cancer) re-affirmed its 1995 classification of carbon black as Group 2B (possibly carcinogenic to humans). All testing done to reach this conclusion were based on inhalation studies of carbon black in its powder form. In this product all carbon black is dispersed in liquid and there is no danger of inhalation.

Section 12. Ecological Information

Ecological Information	
Fish Toxicity (1)	LC50: 66 MG/L.
Testing Time (1)	96 H.
Test Species (1)	Brachydanio Rerio.
Biodegradability	13%. Not readily biodegradable in a waste water treatment system.

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.
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Section 14. Transport Information

Proper Shipping Name	Polyaspartic Polyurea.
Hazard Class:	Non-regulated.

Section 15. Regulatory Information

WHMIS Classification	Controlled. D2B. This product has been classified in accordance with the hazard criteria of the controlled products regulations and the SDS contains all the information required by the controlled products regulations.
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

Revision Date:	February 24, 2017
Note	This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Quantum Technical Services Ltd. The data on this sheet relates only to the specific material designated herein. Quantum Technical Services Ltd. assumes no legal responsibility for use or reliance upon this data.

Section 1. Product and Company Identification

Product Name **SafeCoat® Clear Part B ISO**

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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 victim 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.
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Section 3. Composition and Ingredient Information

<u>Hazardous Ingredients</u>	<u>%</u>	<u>T.L.V.</u>	<u>C.A.S. #</u>	<u>OSHA PEL</u>
Homopolymere of HDI	0-99	N/D	28182-81-2	N/D
Hexamethylene-1,6-Diisocyanate	0-5	N/D	822-06-0	N/D

Section 4. First Aid Measures

Eye Contact	Immediately flush with plenty of water for at least 15 minutes. If redness, itching, or a 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 a 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)	
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	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%).
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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)	Approx. 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/gal.
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)	>10000 mg/Kg (rats).
Dermal (LD50)	>5000 mg/Kg (rabbits).
Inhalation (LC50)	Lower respiratory (pulmonary) irritant. LC50 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.
Mutanagenicity	Not available.
Reproductive Effects	Not available.
Synergistic Materials	None known.

Section 12. Ecological Information

Aquatic Toxicity:

Zebra Fish : LC50 (96hr) 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.
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.
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Section 16. Other Information

Revision Date: February 24, 2017

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