MATERIAL SAFETY DATA SHEET FC-210 Part B

Product: FC-210 Part B **MSDS#: FC-210 Part B**

SECTION 1: CHEMICAL PRODUCT AND COMPANY NAME

Manufacturer/Supplier: ..... ICAT Industries Inc.
648 Welham Rd Barrie Ontario L4N 9A1
Emergency Number:..... (613) 996-6666 CANUTEC
Product Name:..... **FC-210 Part B**
Item Number:..... FC-210 Part B
Chemical Family..... .Modified Aliphatic Isocyanate
Material Use..... COATINGS AND POLYURETHANE APPLICATIONS

SECTION 2: COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredients	%	Exposure Levels	CAS#	LD50 DataLC50 Data
Higher Oligomer of MDI	45-55	not available	9016-87-9 not available	not available
4,4 Diphenolmethane Diisocyanate (MDI)	40-45	0.005 PPM (TWA)	101-68-8 not available	not available
Diphenolmethane Diisocyanate	1-10	0.02 mg/m3	26447-40-5not available	not available

Section 3: HAZARDS IDENTIFICATION

Route of Entry: Eye contact, skin contact, inhalation

Eye Contact: Product liquid, aerosol, or vapors are irritating. Can cause tearing, reddening and swelling. If left untreated, corneal damage can occur and injury is slow ti heal. Damage is usually reversible.

Skin Contact: Irritant. Can cause redness, itching and swelling Can cause severe irritation, drying, cracking, scaling, leading possibly to allergic dermatitis.

Skin Absorption: Not available.

Inhalation: Isocyanate vapor/mists at concentrations above the exposure limit can irritate (burning sensation) the mucous membranes in the respiratory tract, causing runny nose, sore throat, coughing and chest discomfort, shortness of breath and reduced lung function. Persons with pre-existing nonspecific bronchial hyper reactivity can respond to concentrations below the TLV with similar symptoms as well as athsma attack. Exposure well above the TLV may lead to bronchitis, bronchial spasm and pulmonary edema. Effects are usually reversible. Chemical or hyper sensitive pneumonitis, with flu-like symptoms has also been reported. These symptoms can be delayed up to several hours after exposure.

Ingestion: Causes irritation and burning of the mucous membranes of the gastro-intestinal tract. Symptoms can include sore throat, abdominal pain, nausea, and diarrhea.

Chronic Exposure Effects Prolonged contact may cause redness, swelling, rash, scaling, blistering, and in some cases skin sensitization. As a result of previous repeated overexposure, or a single large dose, certain individuals develop sensitization which causes them to react to later exposure to product at levels well below the TLV.
Symptoms including chest tightness, wheezing, cough, shortness of breath or athsma attack, could be immediate or delayed. There are reports that once sensitized, an individual can experience these symptoms upon exposure to dust, cold air or other irritants. This increased lung sensitivity can persist for weeks, and in several cases, for several years.

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Section 4: FIRST AID MEASURES

Eye Contact:	In case of contact, immediately flush eyes, keeping eyelids open, with plenty of water for at least 15 minutes.
Skin Contact:	In case of contact, immediately flush skin with plenty of soap and water. Remove contaminated clothing. Wash clothing before reuse.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical attention.
Ingestion:	Dilute with a small amount (200-250 ml) of water. Do not induce vomiting. Get immediate medical attention.
Additional Information:	Note to physician: Eye - Stain for evidence of corneal injury. If cornea is burned, instill antibiotic steroid preparation frequently. Workplace vapors have produced reversible corneal epithelial edema impairing vision. Skin - This compound is a known skin sensitizer. Treat symptomatically as with contact dermatitis or thermal burns. If burned, treat as thermal burn. Ingestion - Treat symptomatically. There is no specific antidote. Inducing vomiting is contraindicated because of the irritating nature of the compound. Respiratory - This compound is a known pulmonary sensitizer. Treatment is essentially symptomatic. An individual having a skin or pulmonary sensitization reaction to this material should be removed from exposure to any Isocyanate.

SECTION 5: FIRE FIGHTING MEASURES

Flash Point (oC), Method:	199, Pensky-Martens Closed Cup
Auto Ignition Temp.:	not available
Upper Flammability Limit:	not available
Lower Flammability Limit:	not available
Extinguishing media:	Carbon Dioxide, Dry Chemical, foam, water spray
Hazardous Combustion Products:	By fire: Protect against toxic and irritating fumes
Special Fire Fighting Procedures:	Fire fighter should be equipped with SCBA to protect against potentially toxic and irritating fumes. During a fire, Isocyanate and other irritating highly toxic gases may be generated by thermal decomposition or combustion. Cool fire-exposed containers with water spray. Heat will cause pressure buildup and may cause explosive rupture.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Leak/Spill:	Evacuate all non-essential personnel. Ventilate. Eliminate all sources of ignition. Dike area to prevent spreading. Wear full-protective equipment, including respiratory equipment during cleanup.
Major Spills:	If temporary control of Isocyanate vapor is required, a blanket of protein foam may be placed over the spill. Large quantities may be pumped into closed, but not sealed, containers for disposal.
Minor Spills:	Absorb isocyanates with saw dust or other absorbent. Shovel into suitable unsealed containers. Transport to a well-ventilated area (outdoors) and treat with neutralizing solution - mixture of water (80%) with nonionic surfactant Tergitol TMN-10 (20%);, or water (90%), concentrated ammonia (3-8%) and detergent (2%). Add about 10 parts of neutralizer to part of Isocyanate with mixing. Allow to stand uncovered for 48 hours to let carbon dioxide escape.
Clean-up	Decontaminate floor with decontaminating solution, letting stand for at least 15 minutes.

SECTION 7: HANDLING & STORAGE

Handling Procedures:	Avoid skin and eye contact. Avoid breathing vapors. Warning properties (irritation of the eyes, nose and throat or odor) are not adequate to prevent chronic overexposure from inhalation.
Storage Needs:	Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected. Exposure to vapors of heated isocyanates can be extremely dangerous.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Protective Equipment

Eyes:	Splash proof chemical goggles or 8" face shield. Contact lenses should not be worn when working with this chemical.
Respiratory:	At least an air-purifying respirator equipped with an organic vapor cartridge and particulate pre-filters must be worn. However, this should be permitted only for a short period of time (<1 hour) at relatively low concentrations (at or near the TLV). Whenever concentrations of MDI exceed the TLV, a positive pressure supplied air respirator or SCBA is recommended.

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SECTION 8: EXPOSURE CONTROL / PERSONAL PROTECTION (Continued)

Gloves:	Chemical resistant gloves of butyl rubber, polyvinyl alcohol gloves are recommended with a barrier cream. Practice good hygiene. Wash thoroughly before handling any food.
Clothing:	Wear adequate protective clothes.
Footwear:	not applicable
Other:	Eyewash fountain, emergency shower must be in close proximity.
Ventilation:	Local exhaust should be used to maintain the levels below the TLV whenever Isocyanate is processed, heated, or spray applied. Wear an appropriate properly fitted respirator when containment levels exceed the recommended exposure limits. Avoid breathing mists. If general ventilation or local exhaust is inadequate, persons exposed to mists should wear approved breathing devices.
Medical Surveillance:	Medical supervision of all employees who handle or come in contact with isocyanates is recommended. These should included pre-employment and periodic medical examinations with pulmonary function test (FEV, FVC as a minimum). Persons with asthmatic-type conditions, chronic bronchitis, other chronic respiratory diseases or recurrent skin eczema or sensitization should be excluded from working with isocyanates. Once a person is diagnosed as sensitized to an Isocyanate, no further exposure can be permitted.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Odor:	Slightly musty odor
Specific Gravity:	1.2 @ 20°C
Odor Threshold (ppm):	not available
Vapor Pressure:	<0.00001 mm Hg @ 25°C (MDI)
Vapor Density (air=1):	8.5 (MDI)
Evaporation Rate:	not available
Boiling Point:	208°C @ 5 mm Hg (MDI)
Ph:	not available
Solubility in Water:	not soluble Reacts slowly with water to liberate CO_2 gas
Coefficient of Water/Oil:	not available
Freezing Point:	<0°C
Melting Point:	not available

SECTION 10: STABILITY AND REACTIVITY

Incompatibility:	Water, amines, strong bases, alcohols, corrosive to copper alloys and aluminum.
Reactivity Conditions:	not available
Hazardous Products of Decomposition:	By Fire: Carbon Monoxide, oxides of Nitrogen, hydrogen cyanide, MDI vapors or aerosols.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Oral Toxicity:	LD50 >15800 mg/Kg (rat)
Dermal Toxicity:	LD50 >7900 mg/Kg (rat)
Irritancy of Material:	Moderate
Sensitizing Capability:	Isocyanate is known to cause skin and respiratory sensitization in humans.
Carcinogenicity:	not applicable
Teratogenicity:	not available
Mutagenicity:	not available
Reproductive Effects:	not available
Synergistic Materials:	not available

SECTION 12: ECOLOGICAL INFORMATION

Fish Toxicity:	LC50: > 500 mg/L
Testing Time:	24 hours
Test Species:	Daphnia Magna, Limnea Stagnalis, Brachydanio Reryo
Biodegradability	not available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal: In accordance with Municipal, Provincial and Federal regulations. Incineration is the preferred method. Empty containers must be handled with care due to product residue. Decontaminate containers prior to disposal. Empty, decontaminated containers should be crushed to prevent reuse. Do not heat or cut empty containers with electric or gas torch. Vapors and gases may be toxic.

SECTION 14: TRANSPORT INFORMATION

TDG Classification:	Non-Regulated
IATA Classification:	Non-Regulated

SECTION 15: REGULATORY INFORMATION

WHMIS Classification: Controlled. D2A. This product has been classified in accordance with the Hazard Criteria of the Controlled Products Regulations and this MSDS contains all the information required by the Controlled Products Regulations.

SECTION 16: OTHER INFORMATION

Note: This information is furnished without warrant, expressed or implied, except that it is accurate to the best knowledge of ICAT Industries Inc. The data on this sheet relates only to the specific material designated herein. ICAT Industries Inc assumes no legal responsibility for use or reliance upon these data.

Prepared By:	Quality Control and Product Safety Department
Preparation Date:	December 16, 2015