MATERIAL SAFETY DATA SHEET

PRODUCT IDENTITY: 2K WATER BASED ACRYLIC/POLYURETHANE (PART B)

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SECTION 1 - Preparation/Product Information

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Manufactured and supplied by:
Niagara Protective Coatings
7071 Oakwood Drive
Niagara Falls, Ontario L2E 6S5

Emergency Phone: 613-996-6666
Canutec

Date Prepared: July 1, 2015

TDG Classification: Not Regulated

Product Use: Curing agent

WHMIS: Controlled. D2A. D2B. This product has been classified in accordance with the hazard criteria of the controlled products regulations and the MSDS contains all the information required by the controlled products regulations.

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SECTION 2 - Hazardous Ingredients/Identity Information

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HAZARDOUS COMPONENTS Chemical Identity	EXPOSURE LIMITS TLV	TOXICITY: LD50/LC50	AMOUNT %
Aliphatic Polyisocyanates CAS #28182-81-2	0.5 MG/M3 TWA 1.0 MG/M3 STEL	N/A	15-25
Hexamethylene Diisocyanate based Polyisocyanate CAS #28182-81-2	0.5 MG/M3 TWA 1.0 MG/M3 STEL	N/A	75-85
Hexamethylene Diisocyanate CAS #822-06-0	0.005 PPM TWA (ACGIH)	710 MG/KG (ORL/RAT) 570 MG/KG (DRM-RBT) 310-350 MG/M3 1-4 hour (Rat)	.01-1.0

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SECTION 3 - Hazards Identification

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Route of Entry: Skin Contact, Inhalation, Eye Contact
EYE CONTACT: Product liquid, aerosols or vapours are irritating. Can cause tearing, reddening and swelling. May cause discomfort. Prolonged contact can cause corneal damage.
SKIN CONTACT: Irritant. Can cause rash, scaling or blistering. May cause sensitization by skin contact.
SKIN ABSORPTION: Not Available.
INHALATION (ACUTE): Vapour/mists at concentrations above the exposure limits can irritate (burning sensation) the mucous membranes in the respiratory tract. Causes runny nose, sore throat, coughing, chest discomfort, difficult breathing and reduced pulmonary functioning. Persons with preexisting, nonspecific bronchial hyperactivity can respond to concentrations below the TLV with similar symptoms as well as asthma attack. Exposure well above the TLV may lead to bronchitis, bronchial spasm and pulmonary edema. Effects are usually reversible. Chemical or hypersensitive pneumonitis, with flu-like symptoms has also been reported. These symptoms can be delayed up to several hours after exposure.
INGESTION: Can cause burning of the mouth. Can result in irritation of the stomach tissue. Can result in irritation in the digestive tract.
EFFECTS OF CHRONIC EXPOSURE: As a result of previous repeated overexposure or a single large dose, certain individuals develop sensitization which will cause them to react to a later exposure to product at levels well below the TLV. Symptoms including chest tightness, wheezing, cough, shortness of breath or asthma 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 severe cases for several years. Possible risk of irreversible effects. Prolonged or repeated exposure many cause lung damage, including a decrease in lung function. Prolonged contact may cause reddening, swelling, rash, scaling, blistering, and in some cases, skin sensitization.

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SECTION 4 - First Aid Measures

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EYE CONTACT: In case of contact, immediately flush eyes, keeping eyelids open, with plenty of water for at least 15 minutes.
SKIN CONTACT: Immediately flush skin with plenty of soap and water. Remove contaminated clothing. Wash clothing before reuse. Obtain first aid or medical assistance

if needed.
INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen, obtain medical attention:
INGESTION: Never give anything by mouth to an unconscious person. Immediately call a physician.
ADDITIONAL INFORMATION: Note to physician: Eye: Stain for evidence of corneal injury. If cornea is burned, instill antibiotic steroid preparation frequently. Workplace vapours have produced reversible corneal epithelial edema impairing vision. Skin: This compound is a known skin sensitizer. Treat symptomatically as for 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 this 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.

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SECTION 5 - Fire Fighting Measures

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Flash Point (deg C), Method: >93.3, Pensky-Martens Closed Cup
Auto Ignition Temperature: Not applicable
Upper Explosive Limit (% VOL): Not applicable
Lower Explosive Limit (% VOL): Not applicable
Extinguishing Media: Media suitable for other combustible materials in the area. Dry powder. Water Spray, carbon dioxide, foam or dry chemical.
Hazardous Combustion Products: Carbon Monoxide, nitrogen oxides, isocyanates. Traces of Hydrogen cyanide.
Sensitivity to Mechanical Impact: Not applicable
Sensitivity to Static Discharge: Not applicable
Special Fire Fighting Procedures: Firefighter should be equipped with self-contained breathing apparatus and full protective clothing to protect against potentially toxic and irritating fumes. heat will cause pressure buildup and may cause explosive rupture.

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Section 6 - Accidental Release Measures

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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 clean-up. Use a dry absorbent material. For decontamination solution over spill area and allow to react for at least 10 minutes. Shovel into suitable unsealed containers, transport to well-ventilated area (outside) and treat with neutralizing solution: mixture of water (80%) with non-ionic surfactant Tergitol TMN-10 (20%), or; water (90%), concentrated ammonia (3-8%) and detergent (2%). Allow to stand uncovered for 24-48 hours.
Clean Up: Decontaminate floor with decontamination solution, letting stand for at least 15 minutes.

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Section 7 - Handling and Storage

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Handling Procedures: Avoid skin and eye contact. Avoid breathing vapours. Wash hands and arms after handling. Remove contaminated clothing. Keep away from heat, sparks, and open flame. Equipment must be grounded.

Storage Needs: Store in a cool and well-ventilated area. Ideal storage temperature is 10-26.7 Deg C. (50-80 Deg F,\.) (Min/Max: -34/50^{0}C). Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected.

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Section 8 - Exposure Controls/Personal Protection

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PROTECTIVE EQUIPMENT
Eye/Type: Safety glasses. Splash proof chemical goggles or 8" face shield. Contact lenses should not be worn when working with this chemical.
Respiratory/Type: Avoid breathing vapours. A positive pressure, supplied-air respirator or a self-contained breathing apparatus is recommended. When contamination levels exceed the recommended exposure limits, at least an air-purifying respirator equipped with an organic vapour cartridge and particulate pre-filters must be worn.
Gloves/Type: Chemical resistant gloves. A barrier cream. Practice good hygiene, wash

thoroughly before handling any food.
Clothing/Type: Wear adequate protective clothes.
Footwear/Type: Not applicable

Other/Type: Eyewash Fountain. Emergency shower should be in close proximity.
Ventilation Requirements: Ventilate adequately. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination. 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 include 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 excluded from working with isocyanates. Once a person is diagnosed as sensitized to an isocyanate, no further exposure can be permitted.

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Section 9 - Physical and Chemical Properties

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Physical State: Liquid
Odour: Very Slight, if any, odour
Specific Gravity: Not available
Odour Threshold (ppm): Not available
Vapour Pressure (mm Hg): Not applicable
Vapour Density (AIR = 1): Not available
Evaporation Rate: Not available
Boiling Point (deg C): Not available
pH: Not available
Solubility in Water (%W/W): Resin is not soluble. Reacts slowly with water to liberate CO2 gas.
Coefficient of Water/Oil: Not applicable.
Freezing Point (deg C): Not applicable
Melting Point (deg C): Not available

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Section 10 - Stability and Reactivity

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Incompatibility: Water, amines, strong bases, alcohols, metal compounds. Surface active materials.

Reactivity Conditions: Contact with moisture and other materials will react with isocyanates. Exposure to high heat. Reacts with water, forming carbon dioxide.
Hazardous products of decomposition: Thermal decomposition may produce toxic fumes. At high temperatures, by fire: Carbon monoxide, carbon dioxide, oxides of nitrogen, hydrogen cyanide. HDI.

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Section 11 - Toxicological Information

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Acute Oral Toxicity (LD50): >10000 MG/KG (RAT)
Dermal Toxicity (LD50): >5000 MG/KG (RABBIT)
Irritancy or Material: Moderate
Sensitizing Capability of Material: Repeated contact may cause allergic skin and/or respiratory reactions resulting in sensitization of the individual. Respiratory sensitivity results in asthma-like symptoms on subsequent exposure.
Carcinogenicity of Material: Not applicable
Teratongenicity: Not Available
Mutagenicity: Not Available
Reproductive Effects: Not Available

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Section 12 - Disposal Considerations

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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. Do not heat or cut empty containers with electric or gas torch.

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Section 16 - Other Information

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