MATERIAL SAFETY DATA SHEET

PRODUCT IDENTITY: ISOPROPYL ALCOHOL

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SECTION 1 - Preparation/Product Information

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Supplied By:

Niagara Protective Coatings

7071 Oakwood Ave.
Niagara Falls, Ontario L2E 6S5

Emergency Telephone No: (613) 996-6666

Date Prepared: July 1, 2015

Product Use: Organic Solvent

TDG Classification: 3

UN Number: 1219 Packing Group: II

WHMIS CLASSIFICATION: B2. D2B

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Section 2 - Hazardous Ingredients/Identity Information

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HAZARDOUS COMPONENTS:		EXPOSURE LIMITS:	TOXICITY:	
CHEMICAL IDENTITY		TLV	LD50	LC40
	WT RANGE %	CAS#		
Isopropyl Alcohol	40-100%	67-63-0	See Section	

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SECTION 3 - Physical/Chemical Characteristics

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Boiling Point: 83 C

Specific Gravity: 0.787

Freezing Point: -86 C

ph: n/av

Solubility In Water: Complete

Solubility in Other Solvents: Alcohols

Odour: Alcohol odour

Octanol/Water Partition Coefficient: 0.05

Appearance: Colourless. Mobile Liquid

Odour Threshold: 40 ppm

Evaporation Rate: 1.5 (ASTM D 3539) Vapor Density: 2 at 20 C/68 F

Vapor Pressure (MMHG): 4,100 PA at 20 C/ 68 F

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SECTION 3 - HAZARDS IDENTIFICATION

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ROUTE OF ENTRY:

Skin Contact: Not a primary skin irritant after exposure of short duration.

Skin Absorption: N. AV

Eye Contact: Irritating to eyes. Exposure to high vapor concentrations may cause eye irritation.

Inhalation: Exposure to high vapor concentrations may cause respiratory tract irritation, headache, dizziness, nausea, incoordination, drowsiness and loss of consciousness.

Ingestion: Although ingestion is unlikely, liquid would irritate upper digestive tract if swallowed. Ingestion of this product may cause headache, dizziness, fatigue, and central nervous system depression.

Effects of Acute Exposure: Exposure may occur via inhalation, ingestion, skin absorption and skin or eye contact.

Effects of Chronic Exposure: Prolonged and repeated contact with skin can cause defatting and drying of the skin resulting in skin irritation and dermatitis.

Pre-Existing Conditions: Pre-existing eye, skin and respiratory conditions may be aggravated by exposure to this product.

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SECTION 4 - Fire and Explosion Hazard Data

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Flash Point (deg C) and Method: 12 C/54F (Abel)

Flammable Limits/% Volume in Air: LEL: 2.0 UEL: 12.0

Autoignition Temperature (deg C): 425 C/797 F (ASTM D-2155)

Extinguishing Media: Dry Chemical, Carbon Dioxide, Alcohol Foam, Water Fog

Sensitivity Mechanical Impact: No   Sensitivity Static Discharge: Yes

Hazardous Combustion Products: Carbon Monoxide and Carbon Dioxide are produced upon combustion.

Special Procedures: Vapors form a flammable/explosive mixture with air between upper and lower flammable limits. Do not enter confined fire space without adequate protective clothing and an approved positive pressure self-contained breathing apparatus. Evacuate hazard area. Use water to cool fire exposed containers. Containers may explode in heat or fire. Vapors may concentrate in confined areas. Containers exposed to intense heat from fires should be cooled with water to prevent vapor pressure build up which could result in container rupture. Container areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure. Fight fire from maximum distance. Always stay away from ends of containers due to explosive potential. Flammable.

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SECTION 5 - Reactivity Data

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Chemical Stability: Yes   Hazardous Polymerization: Will Not Occur

Incompatibility (Materials to Avoid): Avoid contact with strong oxidizing agents and acids. Aluminum at high temperatures.

Conditions of Reactivity/Instability: Avoid excessive heat, open flames and all ignition sources. Isopropyl Alcohol in contact with air produces peroxides which can explode when concentrated.

Hazardous Decomposition or Byproducts: See Hazardous Combustions products.

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SECTION 6 – Toxicological Properties

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Exposure Limit of Material: Isopropyl Alcohol: 200 ppm TWA-ACGIH; 400 ppm STEL-ACGIH

LC 50 of Material, species and route: Inhalation-Rat: 12,000 ppm for 8 hours.

LD 50 of Material, species and route: Oral-Rat > 4,710 mg/kg;
Dermal Rabbit: > 12,870 mg/kg

Carcinogenicity of Material: Isopropyl Alcohol tested negative in two mutagenicity assays; the mouse micronucleus and Chinese hamster ovary assays.

Teratogenicity: Isopropyl Alcohol, when administered orally to rats and rabbits, produces reduced fetal body weights in rats only at doses which result in treatment related to maternal deaths and produces no indication of fetal effects in rabbits even at dose which resulted in significant maternal mortality. Isopropyl alcohol produces no evidence of developmental neurotoxicity.

Irritancy of Material: This product is irritating to the eyes but is not primary skin irritant after exposure of short duration.

Sensitizing Capability of Material: Not a skin sensitizer.

Synergistic Materials: None

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SECTION 7 – Exposure Controls/Personal Protection

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Note: The following information, while appropriate for this product is general in nature. The selection of personal protective equipment will vary depending on the conditions of use.

Gloves/Type: Impervious gloves (Viton, Nitrile) should be worn at all times when handling this product.

Respiratory/Type: If exposure exceeds occupational exposure limits, use an appropriate NIOSH-approved respirator. Use a NIOSH-approved chemical cartridge respirator with organic vapour cartridges or use a NIOSH-approved supplied air-respirator. For high airbourne concentrations, use a NIOSH-approved supplied-air respirator either self-contained or airline breathing apparatus, operated in positive pressure mode.

Eye/Type: Chemical safety goggles should be worn.

Footwear: N.AV

Clothing/Type: Impervious clothing (apron, coveralls) should also be worn in confined workspaces or where the risk of skin exposure is much higher.

Engineering Controls: Mechanical ventilation is recommended for all indoor situations to control fugitive emissions. Electrical and mechanical equipment should be explosion-proof. Concentrations in air should be maintained below the recommended threshold limit value if unprotected personnel are involved. Make-up air should always be supplied to balance air exhausted (either generally or locally). Local ventilation recommended where mechanical ventilation is ineffective in controlling airborne concentrations below the recommended occupational exposure limit. For personnel entry into

confined spaces (I.E. bulk storage tanks) a proper confined space entry procedure must be followed including ventilation and testing of tank atmosphere.

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SECTION 8 - FIRST AID MEASURES

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EYES: Flush thoroughly with water for at least 15 minutes while holding eyelids open. Obtain medical attention immediately after first aid has been initiated and completed.

SKIN: Flush affected skin with gently flowing lukewarm water for at least 20 minutes. Remove contaminated clothing while rinsing. Wash contaminated skin with mild soap and water for 15 minutes. If irritation occurs and persists, obtain medical attention.

INHALATION: Remove victim from further exposure and restore breathing, if required. Obtain medical attention.

INGESTION: Do Not Induce vomiting. Do not give anything by mouth to an unconscious or convulsing person. Guard against aspiration into lungs by having the individual turn on the their left side. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquids into the lungs. Obtain medical attention immediately.

Notes to Physician: If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before vomiting, gastric lavage with a cuffed endotracheal tube should be considered. Metabolism of Isopropanol forms acetone, which may be detected in the urine and expired air. In contrast to diabetic acidosis, acidosis will occure in the absence of hyperglycemia. Hemodialysis should be considered in severe acute intoxications.

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SECTION 9 - Precautions for Safe Handling and Use

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Waste Disposal Method: Waste management priorities (depending on volumes and concentration of waste) are: 1. Recycle (reprocess), 2. Energy recovery (cement kilns, thermal power generation), 3. Incineration, 4. Disposal at a licensed waste disposal facility. Do not attempt to combust waste on-site. Incinerate at a licensed waste disposal site with approval of environmental authority.

Spill and Leak Procedure: Issue warning "Flammable". Eliminate all sources of ignition. Isolate hazard area and restrict access. Try to work up wind of spill. Avoid direct contact with material. Saturated clothing should be

immediately removed to avoid flammability hazard. Wear appropriate breathing apparatus (if applicable) and protective clothing. Stop leak only if safe to do so. Dike and contain land spills. Contain water spills by booming. Use water fog to knock down vapors; contain run-off. For large spills remove by mechanical means and place in containers. Absorb residue or small spills with absorbent material and remove to non-leaking containers for disposal. Recommended materials: Sand or earth. Flush area with water to remove trace residue. Dispose of recovered material as noted under disposal considerations. Notify appropriate environmental agency. (IES)

Handling Procedures and Equipment: Flammable. Do not cut, drill, grind, weld or perform similar operations on or near containers. Vapors may accumulate and travel to distant ignition sources and flashback. Empty containers may contain hazardous product residues. Fixed equipment as well as transfer containers and equipment should be grounded to prevent accumulation of static charge. Hot surfaces may be sufficient to ignite even in the absence of sparks or flames. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapors are gone. Do not pressurize drum containers to empty them. Avoid breathing vapors and prolonged or repeated contact with skin. Launder contaminated clothing prior to reuse. Use good personal hygiene. Air dry contaminated clothing in a well ventilated area before laundering. Avoid frequent opening and closing of containers and repeated exposure to air as explosive peroxides may be formed.

Storage Needs: Store in a cool, dry, well ventilated area, away from heat and ignition sources. Use explosion proof ventilation to prevent vapor accumulation. Can attack aluminum at elevated temperature.