



# MATERIAL SAFETY DATA SHEET

*This Material Safety Data Sheet complies with the Canadian Controlled Products Act*

**\*\*NOTE: THE FOLLOWING INFORMATION PROVIDED IS FOR THE PRODUCT CONCENTRATE ONLY, NOT FOR USE-DILUTIONS\*\***

SECTION 1 – PRODUCT IDENTIFICATION					
PRODUCT IDENTIFIER:	<b>PAC-D</b>				
PRODUCT USE:	Coagulant additive for wastewater treatment				
SUPPLIER:	Velocity Chemicals Ltd. Unit #1, 9515- 190 <sup>th</sup> St., Surrey, B.C. V4N-3S1 Emergency Telephone: (604) 881-4700 Facsimile: (604) 881-4701			In case of transportation emergency or product spill, contact: In Canada- CANUTEC @ 613-996-6666 (24 hrs.)	
SECTION 2 – HAZARDOUS INGREDIENTS					
HAZARDOUS INGREDIENTS	% (W/W)	CAS NUMBER	LD50	LC50	EXPOSURE LIMITS
Polyhydroxy Aluminum Chloride	15-40	1347-41-9	Not available	Not available	OSHA(PEL) & ACGIH (TLV)= 2 mg/m3 (as Al)
SECTION 3 – PHYSICAL DATA					

<p><b>Physical state:</b> liquid</p> <p><b>Solubility:</b> soluble</p> <p><b>Odour and Appearance:</b> clear and odorless</p> <p><b>pH (100%) @ 20°C:</b> 2.2-2.8</p> <p><b>Specific Gravity @ 20°C:</b> 1.17-1.18</p> <p><b>Odour Threshold (ppm):</b> not determined</p>	<p><b>Vapour Density:</b> not determined</p> <p><b>Vapour Pressure@ 20°C:</b> not determined</p> <p><b>Evaporation Rate:</b> not determined</p> <p><b>Boiling Point (°C):</b> not determined</p> <p><b>Freezing Point (°C):</b> not determined</p> <p><b>Coefficient of water/oil distribution:</b> Greater than 1</p>
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**PAC-D**

#### SECTION 4 – FIRE AND EXPLOSION DATA

<p><b>Flammability:</b> No, product is non-flammable.</p> <p><b>If yes, under what condition:</b> Not applicable.</p> <p><b>Means of Extinction:</b> Dry chemical, alcohol foam, CO<sub>2</sub>, water spray. The product is not flammable. Use extinguishing media suitable for surrounding fires.</p> <p><b>Special Fire Fighting Procedures:</b> Wear NIOSH/OSHA approved, self contained breathing apparatus for fire fighting situations. Use water spray to cool all nearby fire exposed surfaces.</p> <p><b>Explosion Data-</b></p> <p><b>Sensitivity to impact:</b> None</p> <p><b>Sensitivity to static discharge:</b> None</p>	<p><b>Flash Point (°C) and method:</b> not applicable</p> <p><b>Upper Flammable limit (% volume):</b> not applicable</p> <p><b>Lower Flammable limit (% volume):</b> not applicable</p> <p><b>Autoignition temperature (°C):</b> not applicable</p> <p><b>Hazardous combustion products:</b> will liberate toxic, corrosive fumes of hydrogen chloride and carbon oxides.</p>
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#### SECTION 5 – REACTIVITY DATA

<p><b>Chemical Stability:</b> yes, stable under normal storage conditions</p> <p><b>If no, under what conditions:</b></p> <p><b>Incompatibility with other substances:</b> yes</p> <p><b>If so, under what conditions:</b> strong alkalis, strong oxidizers and reducing agents, organic materials, and sensitive metals like aluminum and its alloys.</p> <p><b>Reactivity, and under what conditions:</b> none known</p> <p><b>Hazardous Decomposition Products:</b> will liberate toxic, corrosive fumes of hydrogen chloride and carbon oxides.</p>
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## SECTION 6 – TOXICOLOGICAL PROPERTIES

**Primary route of entry:** skin and eye contact, and inhalation

**Effects of Acute Exposure to Product:** Product exposure may cause skin and eye irritation or burns. Inhaling mist or vapors can cause immediate irritation, burns or discomfort to respiratory system.

**Effects of Chronic Exposure to Product::** no known chronic health effects

**Exposure Limits:** see Section 2 under Hazardous Ingredients

**Irritancy of Product:** corrosive to skin, eyes and respiratory system.

**Sensitization:** none known

**Reproductive Toxicity:** none known

**Mutagenicity:** none known

**Carcinogenicity:** none known

**Teratogenicity:** none known

**Synergistic Products:** none known

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## SECTION 7 – PREVENTATIVE MEASURES

**Respiratory Protection:** Normally not required. Use a NIOSH/OSHA approved for acid mist/dust respirator if mists or vapors are present.

**Gloves:** butyl, rubber, neoprene or viton

**Eye Protection:** splash proof chemical goggles or face shield

**Footwear:** rubber boots

**Clothing:** long sleeve coveralls and rubber apron

**Other:**

**Engineering Controls:** General ventilation for normal operating conditions or local exhaust for confined areas.

**Leak and Spill Procedures:** Wear protective equipment. Contain spill. Prevent runoff to drains or sewers. Recover material by pumping into a suitable waste container. Reuse material if possible, or otherwise neutralize with soda ash before disposal. Dispose in accordance with local regulations.

**Waste Disposal:** Dispose of in accordance with local environmental regulations.

**Handling Procedures and Equipment:** Use good hygiene practices. Avoid contact on skin, eyes or clothing. Avoid inhaling mists or vapors. Safety shower and eye wash station should be available in the immediate work area.

**Storage Requirements:** Store in a cool, dry place away from incompatibles. Do not mix with any other chemicals. Keep container closed when not in use. Keep from freezing and temperatures below 30°C.

**Special Shipping Information:**

WHMIS Classification: E

TDG Classification:

Corrosive Liquid, Acidic, Inorganic, N.O.S. (Polyhydroxy Aluminum Chloride Mixture), Class 8, UN3264, P.G.III

**SECTION 8 – FIRST AID MEASURES**

**Inhalation:** Remove victim to fresh air, apply artificial respiration if necessary. Seek medical help.  
**Ingestion:** Give large amounts of water if conscious. Do not induce vomiting. Get medical help immediately.  
**Skin Contact:** Wash thoroughly with water for 15 minutes. If irritation persists, seek medical attention.  
**Eye Contact:** Flush immediately with water for 15-20 minutes. Seek medical help.

**SECTION 9 - OTHER INFORMATION**

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SUPERCEDES: October 15, 2010

PREPARED BY: Technical Department (Customer Service phone number: 604-881-4700)

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