



# 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>TORNADO</b>			
PRODUCT USE:		Heavy Duty Low Foaming Caustic Cleaner			
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
Potassium Hydroxide	5-10	1310-58-3	365 mg/kg (oral, rat)	Not available	OSHA(PEL) & ACGIH (TLV)= 2mg/m3(ceiling)
Disodium Trioxosilicate	1-5	6834-92-0	1153 mg/kg (oral, rat)	Not available	Manufacturer recommendation= 2mg/m3(ceiling)
Tetrapotassium Pyrophosphate	1-5	7320-34-5	>1000 mg/kg (oral,rat) > 4640 mg/kg(skin,rabbit)	Not available	Not established
SECTION 3 – PHYSICAL DATA					

<p><b>Physical state:</b> liquid</p> <p><b>Solubility:</b> soluble</p> <p><b>Odour and Appearance:</b> clear, mild odor</p> <p><b>pH (100%) @ 20°C:</b> 13.0-14.0</p> <p><b>Specific Gravity @ 20°C:</b> 1.136</p> <p><b>Odour Threshold (ppm):</b> not established</p>	<p><b>Vapour Density:</b> not determined</p> <p><b>Vapour Pressure:</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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## TORNADO

### 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>Usual Fire Hazards:</b> Prolonged contact with sensitive metals like aluminum may form flammable hydrogen gas.</p> <p><b>Hazardous combustion products:</b> may liberate phosphorous oxides and other toxic organic vapours.</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 acids and oxidizers, and reacts with sensitive metals such as zinc or aluminum to form flammable hydrogen gas.</p> <p><b>Reactivity, and under what conditions:</b> none known</p> <p><b>Hazardous Decomposition Products:</b> may form phosphorous oxides upon thermal decomposition.</p>
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### SECTION 6 – TOXICOLOGICAL PROPERTIES

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

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

**Effects of Chronic Exposure to Product:** Prolonged exposure may cause skin dermatitis and respiratory disorder.

**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

## TORNADO

### SECTION 7 – PREVENTATIVE MEASURES

**Respiratory Protection:** Use a NIOSH/OSHA approved for alkaline mist/dust respirator if mists or vapors are present.

**Gloves:** butyl or natural rubber

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

**Footwear:** rubber shoes

**Clothing:** long sleeve coveralls

**Other:** rubber apron

**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 vacuum or pump into a suitable waste container. Reuse material if possible, or otherwise neutralize with acid 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 with eyes, skin and clothing. Avoid inhaling mists/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, N.O.S. (Potassium Hydroxide and Disodium Trioxosilicate Mixture), Class 8, UN 1760, 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: December 14, 2007

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

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