

MATERIAL SAFETY DATA SHEET

IDENTIFICATION & USE	TYPE OF PRODUCT Chloride Reagent, Part A		CHEMICAL FAMILY Inorganic Acid	
	PRODUCT NUMBER A1100179		FORMULA HNO ₃	
	MANUFACTURER'S NAME AND ADDRESS IC CONTROLS		PRODUCT USE	
	29 Centennial Rd.		EMERGENCY TELEPHONE NO. IC CONTROLS: (519)941-8161	
	Orangeville, Ont. L9W 1R1		Poison Info Centre: 1 800 268-9017	
HAZARDOUS INGREDIENTS	CONTAINER SIZE AND TYPE 1 L bottle		USE AS RECEIVED	mix
	SHIPPING NAME Nitric acid, not more than 70 per cent nitric acid.		CLASS	8
	PIN 2031	WHMIS Classification Class E — corrosive	PACKING GROUP	II
	CONCENTRATION*	HAZARDOUS INGREDIENTS	CHEMICAL NAMES	LD ₅₀ mg/kg
	1 50-70	Nitric acid		No Data
PHYSICAL DATA	FREEZING POINT		-33 °C	MELTING POINT
	VAPOUR PRESSURE		5.4 mm Hg	VAPOUR DENSITY (AIR = 1)
	COEFFICIENT OF WATER/OIL DISTRIBUTION		No Data	EVAPORATION RATE
	ODOUR THRESHOLD		No Data	PHYSICAL STATE
	ODOUR AND APPEARANCE		Clear, colourless to slightly yellow fuming aqueous solution with a suffocating acrid odour.	
FIRE & EXPLOSION DATA	FLASH POINT AND METHOD OF DETERMINATION		Not applicable	
	CONDITIONS OF FLAMMABILITY		Moderate by chemical reaction with reducing agents.	
	MEANS OF EXTINCTION		water	
	HAZARDOUS COMBUSTION PRODUCTS		Toxic gases and vapours such as oxides of nitrogen and NO _x may be released.	
	EXPLOSION DATA		No Data	

MATERIAL SAFETY DATA SHEET

REACTIVITY	STABLE	YES	CONDITIONS TO AVOID High temperature			PRODUCT NUMBER A1100179
	UNSTABLE					
	INCOMPATIBILITY—MATERIALS TO AVOID Wood, turpentine and other hydrocarbon solvents, metals, powders, H ₂ S.					
	HAZARDOUS DECOMPOSITION PRODUCTS Oxides of nitrogen					
CONDITIONS OF REACTIVITY						
HEALTH HAZARD DATA	HAZARDOUS ROUTES OF ENTRY	INHALATION YES	INGESTION YES	EYE CONTACT YES	SKIN CONTACT YES	SKIN ABSORPTION YES
	EFFECTS OF EXPOSURE (ACUTE) Inhalation: may cause pain, vomiting, severe burning of the mouth and throat, and extensive damage or perforation of the esophagus. May be fatal. May cause pulmonary edema.					
	EFFECTS OF EXPOSURE (CHRONIC) Skin Contact: severe skin burns, blisters. Prolonged or repeated contact to dilute solutions may cause irritation and dermatitis. Eye Contact: severe burns, watering, conjunctivitis leading to permanent damage, possible blindness. Ingestion: Severe burns to mouth, throat, esophagus and stomach, nausea, vomiting. Risk of stomach perforation, convulsions, coma, and death.					
	EXPOSURE LIMITS					
	SENSITIZATION TO PRODUCT					
	CARCINOGENICITY					
	OTHER TOXICOLOGICAL EFFECTS					
	Carcinogenicity: Not listed as carcinogen by NTP					
	Get medical attention immediately.					
	Eyes: immediately flush eyes with a stream of running water for a minimum of 20 minutes.					
	EMERGENCY AND FIRST AID PROCEDURES					
	Using any available clean container, pour water over the eye in a gentle steady stream.					
	Position casualty lying on back, face tilted to one side. Hold eyelids open while flushing.					
Skin: immediately flush the exposed area with large amounts of water while removing contaminated clothing. Continue washing area for 15 minutes. Repeat flushing if irritation persists.						
Inhalation: Remove victim to fresh air. Give artificial respiration if breathing has stopped.						
Ingestion: do not induce vomiting. If victim is alert and not convulsing rinse mouth and give 1/2 to 1 cup of water or milk to dilute acid. If convulsing, have lean forward with head down.						
PREVENTIVE MEASURES	RESPIRATORY PROTECTION		1/2 to 1 cup of water or milk to dilute acid. If convulsing, have lean forward with head down.			
	VENTILATION	LOCAL EXHAUST	recommended			SPECIAL
		MECHANICAL (GENERAL)				OTHER
	HAND PROTECTION		impervious gloves		EYE PROTECTION	
					chemical goggles	
	PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL					
	Treat with neutralizing agent and recover for disposal.					
	WASTE DISPOSAL METHOD					
	Dispose of at an approved landfill site or by incineration in accordance with local, provincial or federal regulations as required. Otherwise neutralize and dilute.					
	HANDLING PROCEDURES AND EQUIPMENT					
When diluting, always add acid to water, not water to acid. Heat is generated by dilution.						
Wear personal protective clothing. Avoid contact with acid or vapours.						
STORAGE REQUIREMENTS						
Store in well-ventilated area away from incompatibles. Avoid direct sunlight and heat sources.						
SPECIAL SHIPPING INFORMATION						
PREPARATION	PREPARED BY Peter Bakker		APPROVED BY Peter Bakker		TELEPHONE	
	TITLE		Chemistry Manager		(519) 941-8161	
			<i>Peter Bakker</i>		DATE	
				November 5, 2009		
The information provided in this Material Safety Data Sheet is compiled from data currently available to us. Safe use of the materials and adoption of safety precautions are the responsibility of the user. IC CONTROLS makes no representation or warranties, either express or implied, of merchantability, fitness for a particular purpose with respect to the information set forth herein or to the product to which the information refers. Accordingly, IC CONTROLS will not be responsible for damages, including consequential damages, resulting from the use of or reliance upon this information.						