

MATERIAL SAFETY DATA SHEET

IDENTIFICATION & USE	TYPE OF PRODUCT 100 ppm Hydrazine Standard		CHEMICAL FAMILY				
	PRODUCT NUMBER Orion 151810		FORMULA				
	MANUFACTURER'S NAME AND ADDRESS Thermo fisher		PRODUCT USE Analyzer standard				
	166 Cummings Center		EMERGENCY TELEPHONE NO. 1-800-424-9300				
	Beverly, MA 01915						
	CONTAINER SIZE AND TYPE		USE AS RECEIVED		YES		
HAZARDOUS INGREDIENTS	SHIPPING NAME		CLASS				
	PIN	WHMIS Classification Not controlled (non-hazardous due to low conc.)		PACKING GROUP			
	CONCENTRATION*	HAZARDOUS	INGREDIENTS	CHEMICAL NAMES	LD ₅₀ mg/kg	LC ₅₀ **	CAS REGISTRY NO.
	1	0.03		hydrazine dihydrochloride (Cl ₂ H ₆ N ₂)	60 mg/kg (rol,rat)	570ppm/h (ihl,rat)	5341-61-7
	1	1.15		acetic acid	3.3 g/kg (rol,rat)	5.6ppt/h (ihl,mus)	64-19-7
PHYSICAL DATA	* (1) % W/W (2) % V/V (3) % g/L		** SPECIES AND ROUTE				
	FREEZING POINT	-1 °C	MELTING POINT	NA °C	BOILING POINT	100 °C	
	VAPOUR PRESSURE	NA	VAPOUR DENSITY (AIR = 1)	1	SPECIFIC GRAVITY (H ₂ O = 1)	1	
	COEFFICIENT OF WATER/OIL DISTRIBUTION	No Data	EVAPORATION RATE	NA	pH AT 25 °C	5-7	
	ODOUR THRESHOLD	No Data	PHYSICAL STATE	GAS LIQUID PASTE SOLID POWDER	X		
	ODOUR AND APPEARANCE Colourless liquid, vinegar-like odour.						
FIRE & EXPLOSION DATA	FLASH POINT AND METHOD OF DETERMINATION			FLAMMABLE LIMITS	L.E.L.	U.E.L.	
	CONDITIONS OF FLAMMABILITY none						
	MEANS OF EXTINCTION any						
	HAZARDOUS COMBUSTION PRODUCTS NA						
				AUTO IGNITION TEMP.	°C		
	EXPLOSION DATA	SENSITIVITY TO MECHANICAL IMPACT none					
	SENSITIVITY TO STATIC DISCHARGE none						
SPECIAL FIRE FIGHTING PROCEDURES							

MATERIAL SAFETY DATA SHEET

REACTIVITY	STABLE	YES	CONDITIONS TO AVOID		PRODUCT NUMBER Orion 151810	
	UNSTABLE					
	INCOMPATIBILITY — MATERIALS TO AVOID chromic acid, sodium peroxide, nitric acid and oxidizing agents.					
	HAZARDOUS DECOMPOSITION PRODUCTS Small amounts of carbon monoxide and nitrogen gases may be emitted in a fire.					
CONDITIONS OF REACTIVITY						
HEALTH HAZARD DATA	HAZARDOUS ROUTES OF ENTRY	INHALATION	INGESTION	EYE CONTACT YES	SKIN CONTACT	SKIN ABSORPTION
	EFFECTS OF EXPOSURE (ACUTE) The small amount of hydrazine and acetic acid present in this product is considered to be non-hazardous. Hydrazine is a suspect carcinogen (IARC — animal positive).					
	EFFECTS OF EXPOSURE (CHRONIC)					
	EXPOSURE LIMITS Not established					
	SENSITIZATION TO PRODUCT No information available.					
	CARCINOGENICITY					
	OTHER TOXICOLOGICAL EFFECTS					
	EMERGENCY AND FIRST AID PROCEDURES Seek medical attention for all serious forms of exposure.					
	Eyes and Skin: flush contact area with a stream of running water.					
	Ingestion: Drink large amounts of water and magnesia.					
PREVENTIVE MEASURES	RESPIRATORY PROTECTION					
	VENTILATION	LOCAL EXHAUST			SPECIAL	
		MECHANICAL (GENERAL)			OTHER	
	HAND PROTECTION			EYE PROTECTION chemical safety goggles		
	PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL If local authorities permit, mop up with plenty of water and run to waste.					
	WASTE DISPOSAL METHOD Dispose of in accordance with local, provincial, and federal laws.					
	HANDLING PROCEDURES AND EQUIPMENT					
	STORAGE REQUIREMENTS Store at room temperature. Keep container sealed to guard product integrity.					
	SPECIAL SHIPPING INFORMATION					
	PREPARATION	PREPARED BY Peter Bakker		APPROVED BY Peter Bakker		
TITLE		TITLE		TELEPHONE		
		<i>Peter Bakker</i>		(519) 941-8161		
				DATE November 5, 2009		
<p><i>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.</i></p>						