

MATERIAL SAFETY DATA SHEET

IDENTIFICATION & USE	TYPE OF PRODUCT internal filling solution		CHEMICAL FAMILY inorganic caustic solution			
	PRODUCT NUMBER Orion 180823		FORMULA KOH			
	MANUFACTURER'S NAME AND ADDRESS Thermo Fisher		PRODUCT USE			
	166 Cummings Center		EMERGENCY TELEPHONE NO. 1-800-424-9300			
	Beverly, MA 01915					
HAZARDOUS INGREDIENTS	CONTAINER SIZE AND TYPE 1L polyethylene bottle		USE AS RECEIVED	YES		
	SHIPPING NAME Potassium hydroxide, solution		CLASS	8 (9.2)		
	PIN 1814	WHMIS Classification Class E — Corrosive material	PACKING GROUP	II		
	CONCENTRATION [*]	HAZARDOUS INGREDIENTS	CHEMICAL NAMES	LD ₅₀ mg/kg	LC ₅₀ ^{**}	CAS REGISTRY NO.
1 < 5	Potassium Hydroxide		N.Avail.	7500 mg (rat, oral)	1310-58-3	
* (1) % W/W (2) % V/V (3) % g/L			** SPECIES AND ROUTE			
PHYSICAL DATA	FREEZING POINT	-20 °C	MELTING POINT	N. Appl. °C	BOILING POINT	105 °C
	VAPOUR PRESSURE	N. Avail.	VAPOUR DENSITY (AIR = 1)	N. Avail.	SPECIFIC GRAVITY (H ₂ O = 1)	1.1
	COEFFICIENT OF WATER/OIL DISTRIBUTION	Not Appl.	EVAPORATION RATE	Not Avail.	pH AT 25 °C	13
	ODOUR THRESHOLD	Not Avail.	PHYSICAL STATE	GAS LIQUID PASTE SOLID POWDER	X	
	ODOUR AND APPEARANCE Clear colourless solution, odourless.					
FIRE & EXPLOSION DATA	FLASH POINT AND METHOD OF DETERMINATION not combustible		FLAMMABLE LIMITS	L.E.L. N. A.	U.E.L. N. A.	
	CONDITIONS OF FLAMMABILITY					
	MEANS OF EXTINCTION Use an extinguisher appropriate to the surrounding material that is burning.					
	HAZARDOUS COMBUSTION PRODUCTS					
				AUTO IGNITION TEMP.	°C	
	EXPLOSION DATA	SENSITIVITY TO MECHANICAL IMPACT none				
	SENSITIVITY TO STATIC DISCHARGE none					
SPECIAL FIRE FIGHTING PROCEDURES						

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REACTIVITY	STABLE	YES	CONDITIONS TO AVOID		PRODUCT NUMBER Orion 180823	
	UNSTABLE					
	INCOMPATIBILITY—MATERIALS TO AVOID strong acids, maleic anhydride, nitro organic compounds, phosphorus HAZARDOUS DECOMPOSITION PRODUCTS May release toxic fumes of potassium oxide oxide CONDITIONS OF REACTIVITY					
HEALTH HAZARD DATA	HAZARDOUS ROUTES OF ENTRY	INHALATION YES	INGESTION YES	EYE CONTACT YES	SKIN CONTACT YES	SKIN ABSORPTION
	EFFECTS OF EXPOSURE (ACUTE) Irritation or corrosion of skin. Inhalation of mist may be irritating to the nose, throat and upper respiratory tract. Eye contact causes KOH to react with the protein and moisture in the eye.					
	EFFECTS OF EXPOSURE (CHRONIC) Bronchial irritant, coughing, pneumonia. Extensive skin contact may cause dermatitis.					
	EXPOSURE LIMITS					
	SENSITIZATION TO PRODUCT					
	CARCINOGENICITY					
	OTHER TOXICOLOGICAL EFFECTS					
	EMERGENCY AND FIRST AID PROCEDURES					
	Unless contact has been slight, get medical attention. Remove contaminated clothing.					
	Eyes: irrigate with water for at least 15 minutes while lifting eyelids.					
Skin: wash with large amounts of water and soap while removing affected clothing.						
Ingestion: rinse mouth thoroughly with water. Do not induce vomiting. Have person drink plenty of water to dilute. Never give anything by mouth if person is rapidly losing consciousness, or is unconscious or convulsing. Give artificial respiration or perform CPR if necessary.						
PREVENTIVE MEASURES	RESPIRATORY PROTECTION					
	VENTILATION	LOCAL EXHAUST to meet exposure limits			SPECIAL Not Applicable	
		MECHANICAL (GENERAL) Not Applicable			OTHER Not Applicable	
	HAND PROTECTION impervious gloves			EYE PROTECTION splash-proof safety goggles		
	PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL					
	Ventilate area, wear impervious gloves, face shield. Prevent skin contact. Neutralize with HCl, flush resulting KCl down drain. Wash site of spillage with water and detergent.					
	WASTE DISPOSAL METHOD					
	Follow all federal, provincial and local regulations for disposal.					
	HANDLING PROCEDURES AND EQUIPMENT					
	Emergency eyewash should be available. Handle with care to avoid direct skin or eye contact.					
STORAGE REQUIREMENTS						
Store away from materials which react violently with potassium hydroxide.						
SPECIAL SHIPPING INFORMATION						
PREPARATION	PREPARED BY Peter Bakker		APPROVED BY Peter Bakker			
	TITLE		TITLE		TELEPHONE	
			Chemistry Manager		(519) 941-8161	
		<i>Peter Bakker</i>		DATE		
				November 5, 2009		
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