

## MATERIAL SAFETY DATA SHEET

IDENTIFICATION & USE	TYPE OF PRODUCT <b>Sodium Monitor Reagent (181130)</b>		CHEMICAL FAMILY <b>inorganic amine</b>							
	PRODUCT NUMBER <b>Orion 181130</b>		FORMULA <b>NH<sub>4</sub>OH</b>							
	MANUFACTURER'S NAME AND ADDRESS <b>Thermo Fisher</b>		PRODUCT USE <b>Sodium Monitor Reagent</b>							
	166 Cummings Center		EMERGENCY TELEPHONE NO. <b>1-800-424-9300</b>							
	Beverly, MA 01915									
	CONTAINER SIZE AND TYPE		USE AS RECEIVED	YES						
HAZARDOUS INGREDIENTS	SHIPPING NAME <b>Ammonia Solution</b>		CLASS		8 (9.2)					
	PIN <b>2672</b>	WHMIS Classification <b>Class E — Corrosive material</b>		PACKING GROUP	III					
	CONCENTRATION*	HAZARDOUS	INGREDIENTS	CHEMICAL NAMES	LD <sub>50</sub> mg/kg	LC <sub>50</sub> **	CAS REGISTRY NO.			
	1	50-60	Ammonium Hydroxide		ORL-Rat		1336-21-6			
					350 mg/kg					
PHYSICAL DATA	FREEZING POINT		-10 °C	MELTING POINT		N. Appl. °C	BOILING POINT		100 °C	
	VAPOUR PRESSURE		N.A.	VAPOUR DENSITY (AIR = 1)		N.A.	SPECIFIC GRAVITY (H <sub>2</sub> O = 1)		0.88	
	COEFFICIENT OF WATER/OIL DISTRIBUTION		No Data	EVAPORATION RATE		No Data	pH AT 25 °C		11.5-12	
	ODOUR THRESHOLD		No Data	PHYSICAL STATE		GAS	LIQUID	PASTE	SOLID	POWDER
	ODOUR AND APPEARANCE		Colourless, strong ammoniacal odour							
	ODOUR AND APPEARANCE		Colourless, strong ammoniacal odour							
FIRE & EXPLOSION DATA	FLASH POINT AND METHOD OF DETERMINATION				FLAMMABLE LIMITS		L.E.L.	U.E.L.		
	CONDITIONS OF FLAMMABILITY									
	MEANS OF EXTINCTION <b>Carbon dioxide, dry chemical</b>									
	HAZARDOUS COMBUSTION PRODUCTS <b>Can form explosive compounds when in contact with silver, mercury, gold, halogens or chlorites. Dangerous—emits irritating fumes and can inflict burns.</b>									
	EXPLOSION DATA						AUTO IGNITION TEMP.		°C	
			SENSITIVITY TO MECHANICAL IMPACT <b>None</b>							
		SENSITIVITY TO STATIC DISCHARGE <b>None</b>								
SPECIAL FIRE FIGHTING PROCEDURES										

# MATERIAL SAFETY DATA SHEET

<b>REACTIVITY</b>	STABLE	YES	CONDITIONS TO AVOID			PRODUCT NUMBER Orion 181130
	UNSTABLE					
	INCOMPATIBILITY—MATERIALS TO AVOID Halogens, HCl, HF, HNO <sub>3</sub> , AgNO <sub>2</sub> , H <sub>2</sub> SO <sub>4</sub> , NH <sub>4</sub> NO <sub>3</sub> .					
	HAZARDOUS DECOMPOSITION PRODUCTS Hazardous fumes.					
CONDITIONS OF REACTIVITY						
<b>HEALTH HAZARD DATA</b>	HAZARDOUS ROUTES OF ENTRY	INHALATION YES	INGESTION YES	EYE CONTACT YES	SKIN CONTACT YES	SKIN ABSORPTION YES
	EFFECTS OF EXPOSURE (ACUTE) Burns of skin or eyes, vapours irritating to eyes, nose, throat and lungs (can cause severe damage). Coughing. Swallowing may cause severe injury or death. Avoid breathing fumes.					
	EFFECTS OF EXPOSURE (CHRONIC) Irritation of the eyes and upper respiratory tract, may cause severe breathing difficulties.					
	EXPOSURE LIMITS					
	SENSITIZATION TO PRODUCT Respiratory, heart, skin diseases.					
	CARCINOGENICITY					
	OTHER TOXICOLOGICAL EFFECTS Carcinogenicity: Not found on IARC monographs or ACGIH lists					
	Symptoms of Exposure: Irritation of the eyes, conjunctivitis, coughing, dyspnea.					
	EMERGENCY AND FIRST AID PROCEDURES Get medical attention immediately.					
	<b>Eyes and Skin:</b> immediately flush with a stream of running water for a minimum of 15 minutes, occasionally lifting eye lid.					
	<b>Inhalation:</b> Remove victim to fresh air. Give artificial respiration if breathing has stopped.					
	<b>Ingestion:</b> Get immediate medical attention. Do not induce vomiting, give large amounts of water if conscious.					
<b>PREVENTIVE MEASURES</b>	RESPIRATORY PROTECTION 100 ppm CCRS; SCBA. Escape: GMS; SCBA					
	VENTILATION	LOCAL EXHAUST to control exposure limits			SPECIAL	
		MECHANICAL (GENERAL)			OTHER	
	HAND PROTECTION impervious gloves			EYE PROTECTION chemical goggles		
	PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL Neutralize with HCl. Clean up and set aside for waste disposal.					
	WASTE DISPOSAL METHOD Dispose of in accordance with local, provincial, and federal laws.					
	HANDLING PROCEDURES AND EQUIPMENT Emergency eye wash should be available					
	STORAGE REQUIREMENTS Keep well sealed. Store in cool dry place.					
	SPECIAL SHIPPING INFORMATION IATA: UN 2672 (819) packaging group III, ammonia solutions.					
	<b>PREPARATION</b>	PREPARED BY Peter Bakker		APPROVED BY Peter Bakker		TELEPHONE (519) 941-8161
TITLE Chemistry Manager		DATE <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.						