



SAFETY DATA SHEET — 16 Sections

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier ASR - Yellow Indicator Reagent		[WHMIS Classification]	
Product Use Laboratory Chemicals, R & D Use			
Manufacturer's Name James Instruments, Inc.		Supplier's Name Avantor Performance Materials, Inc.	
Street Address 3727 N Kedzie Ave.		Street Address 3477 Corporate Parkway, Suite 200	
City Chicago		State IL	City Center Valley
Postal Code 60618	Emergency Telephone 800-424-9300	Postal Code 18034	Emergency Telephone 908-859-2151
Date MSDS Prepared July 18, 2019		MSDS Prepared By James Instruments, Inc.	Phone Number 1-773-463-6565

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients (<i>specific</i>)	Content %	CAS Number	LD ₅₀ of Ingredient (<i>specify species and route</i>)	LC ₅₀ of Ingredient (<i>specify species</i>)
Sodium Cobaltinitrite -Supersaturated soln.(60mL)	5-10	13600-98-1		

SECTION 3 — HAZARDS IDENTIFICATION

Route of Entry	<input checked="" type="checkbox"/> Skin Contact	<input type="checkbox"/> Skin Absorption	<input checked="" type="checkbox"/> Eye Contact	<input checked="" type="checkbox"/> Inhalation	<input checked="" type="checkbox"/> Ingestion
[Emergency Overview]	If exposed or concerned: Get medical advice/attention. Call a POISON CENTER and or physician.				
[WHMIS Symbols]					
Potential Health Effects	* Skin Contact: Causes irritation to skin. Symptoms include redness, itching, and pain. May cause dermatitis.				
	* Inhalation: Causes irritation to the respiratory tract, symptoms may include coughing, shortness of breath, and nausea. Respiratory hypersensitivity, asthma may appear. Inhalation of cobalt dust and fumes is associated with an increased incidence of lung disease.				
	* Eye Contact: Causes irritation, redness, and pain				
	* Ingestion: Toxic. Causes abdominal pain, nausea, vomiting, flushing of the face and ears, mild hypo-tension, rash, and ringing in the ears. May have cumulative toxic action where elimination cannot keep pace with absorption. Large amounts depress erythrocyte production.				

SECTION 4 — FIRST AID MEASURES

Skin Contact	Wash skin thoroughly (about 15 minutes) with soap and water. Get medical attention if irritation persists after washing. Wash contaminated clothing before re-use.
Eye Contact	Flush thoroughly with water for about 15 minutes. If irritation continues to occur, get medical assistance.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. Get medical attention if symptoms persist. (Show Data Sheet to doctor in attendance.)
Ingestion	Rinse mouth thoroughly. Induce vomiting immediately. Drink a few glasses of water or milk. Call a POISON Center or doctor/physician if you feel unwell.

SAMPLE FORMAT PROVIDED BY THE WORKERS' COMPENSATION BOARD OF BRITISH COLUMBIA

57M6 (6/99)

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SECTION 5 — FIRE FIGHTING MEASURES

Flammable <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, under which conditions? Not combustible, but substance is an oxidizer and its heat of reaction with reducing agents or combustible may cause ignition.	
Means of Extinction Water spray, dry powder or carbon dioxide. Move containers from fire area if possible without risk. Use standard protective equipment, flame retardant and NIOSH self contained breathing apparatus.		
Flashpoint (° C) and Method No information available	Upper Flammable Limit (% by volume) No information available	Lower Flammable Limit (% by volume) No information available
Autoignition Temperature (°C) No information available	Explosion Data — Sensitivity to Impact No information available	Explosion Data — Sensitivity to Static Discharge No information available
Hazardous Combustion Products		
[NFPA]		

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Leak and Spill Procedures
Keep unauthorized personnel away. Use personal protective equipment. Ventilate area of leak or spill. (See section 8 of the MSDS for Personal Protective Equipment) Sweep up and containerize with clearly labeled container for chemical waste removal. Avoid dust formation. Clean surface thoroughly to remove residual contamination. Prevent entry into waterways, sewer, basement or confined areas. Stop leak if you can do so without risk.
Inform authorities if large amounts are involved. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

SECTION 7 — HANDLING AND STORAGE

Handling Procedures and Equipment
* Use personal protective equipment as required. * Avoid contact with eyes, skin, and clothing. * Avoid inhalation of dust.
* Wash thoroughly after handling. * Wash hand before eating eat, drink, or smoke in workplace.
Storage Requirements
* Keep in a tightly closed container, stored in a dry, cool, ventilated area. * Protect against physical damage and moisture. * Isolate from any source or ignition.
* Avoid storage on wood floors. * Separate from incompatibles combustibles, organic or other readily oxidizable materials.

SECTION 8 — EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure Limits	<input checked="" type="checkbox"/> ACGIH TLV (0.02 mg/m ³) A3: Animal Carcinogen	<input checked="" type="checkbox"/> OSHA PEL (0.1 mg/m ³) Cobalt metal dust/ fume as Co.	<input type="checkbox"/> Other (<i>specify</i>)
Specific Engineering Controls (<i>such as ventilation, enclosed process</i>)			
A Ventilation system of local and/or general exhaust is recommended to keep employee exposure below the Airborne Exposure limits.			
Typically 10 Air changes should be made per hour. If exposure limits have not been established, maintain airborne levels to an acceptable level.			
An eye wash and safety shower must be available in the immediate work area.			
Personal Protective Equipment	<input checked="" type="checkbox"/> Gloves	<input checked="" type="checkbox"/> Respirator	<input checked="" type="checkbox"/> Eye
	<input type="checkbox"/> Footwear	<input checked="" type="checkbox"/> Clothing	<input type="checkbox"/> Other
If checked, please specify type			
* Skin Protection: Wear protective gloves. * Wear suitable protective clothing. * Respiratory Protection: In case or inadequate ventilation use suitable respirator.			
* Eye Protection: Use tight fitting goggles if dust is generated.			
* Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking.			
* Routinely wash work clothing and protective equipment to remove any contaminants.			

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Physical State Solid (before added to water)	Odour and Appearance Odorless / Yellow-Orange Powder	Odour Threshold (ppm) No data available
Specific Gravity No data available	Vapour Density (air = 1) No data available	Vapour Pressure (mmHg) No data available
Evaporation Rate No data available	Boiling Point (° C) No data available	Freezing Point (° C) No data available
pH No data available	Coefficient of Water/Oil Distribution No data available	[Solubility in Water] Very soluble

SECTION 10 — STABILITY AND REACTIVITY

Chemical Stability <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If no, under which conditions? Material is stable under normal conditions.
Incompatibility with Other Substances <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, which ones? Strong reducing agents. Organic compounds. Flammable/combustible material(s).
Possibility of hazardous reactions: Hazardous polymerization does not occur.	
Reactivity, and under what conditions? Contact with combustible material may cause fire.	
Hazardous Decomposition Products	
Toxic metal fumes may form when heated to decomposition. Thermal decomposition may produce oxides of Nitrogen.	

SECTION 11 — TOXICOLOGICAL INFORMATION

Effects of Acute Exposure	No data available	
Effects of chronic exposure	No data available	
Irritancy of Product	May cause skin irritation. May irritate eyes. May cause allergy or asthma symptoms or breathing difficulties if inhaled.	
Skin sensitization	May cause skin irritation, or an allergic skin reaction	Respiratory sensitization May cause allergy or asthma/breathing problems
Carcinogenicity-IARC	Suspected of causing cancer to humans. Eval. - 2B	Carcinogenicity - ACGIH
Reproductive toxicity	No data available	Teratogenicity
Embrototoxicity		Mutagenicity No mutagenic components identified.
Name of synergistic products/effects		

SECTION 12 — ECOLOGICAL INFORMATION

Ecotoxicity	No data available
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* Other adverse Effects: The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

SECTION 13 — DISPOSAL CONSIDERATIONS

Waste Disposal	Discharge, treatment, or disposal may be subject to national, state or local laws. Be sure to check with local ordinances before disposing.
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SECTION 14 — TRANSPORT INFORMATION

Special Shipping Information	Non-Hazardous; based on aqueous solution state and % content.	
		PIN
TDG	[DOT]	
[IMO]	[ICAO]	

SECTION 15 — REGULATORY INFORMATION

[WHMIS Classification]	[OSHA]	None present, or nor present in regulated quantities.
[SERA] 311/312 Sodium Cobaltinitrite, Threshold planning qty = 10,000 lbs	[TSCA]	
<i>This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by CPR.</i>		

SECTION 16 — OTHER INFORMATION

The information listed on this SDS is based on data provided by the manufacturer; SDS revised Sept, 2016.
Disclaimer: The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for the safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to a specific material designated and may not be valid for such material used in conjunction with any other material or in any process, unless specified in the text.