

Material Safety Data Sheet

Section 1. Product and Company Identification

Product Name	Iodine, Lugol's	Product Code	624
Manufacturer	EMD Chemicals Inc. P.O. Box 70 480 Democrat Road Gibbstown, NJ 08027 Prior to January 1, 2003 EMD Chemicals Inc. was EM Industries, Inc. or EM Science, Division of EM Industries, Inc.	Effective Date	3/4/2003
For More Information Call	856-423-6300 Technical Service Monday-Friday: 8:00 AM - 5:00 PM	In Case of Emergency Call	800-424-9300 CHEMTREC (USA) 613-996-6666 CANUTEC (Canada) 24 Hours/Day: 7 Days/Week
Synonym	None.		
Material Uses	Laboratory Reagent		
Chemical Family	Iodine Solution		

Section 2. Composition and Information on Ingredients

Component	CAS #	% by Weight
POTASSIUM IODIDE	7681-11-0	0-1
IODINE	7553-56-2	0-1
Water	7732-18-5	98-100

Section 3. Hazards Identification

Physical State and Appearance	Liquid.
Emergency Overview	CAUTION ! MAY CAUSE EYE AND SKIN IRRITATION. CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: RESPIRATORY TRACT, SKIN, CENTRAL NERVOUS SYSTEM, EYE, LENS OR CORNEA.
Routes of Entry	Eye contact. Inhalation. Ingestion.
Potential Acute Health Effects	<p>Eyes May be hazardous in case of eye contact (irritant).</p> <p>Skin May be hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.</p> <p>Inhalation No known acute effects of this product resulting from inhalation.</p> <p>Ingestion No known acute effects of this product resulting from ingestion.</p>
Potential Chronic Health Effects	
Carcinogenic Effects	This material is not known to cause cancer in animals or humans.

Additional information See Toxicological Information (section 11)

Medical Conditions Aggravated by Overexposure:

Repeated or prolonged exposure is not known to aggravate medical condition.

Section 4. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.
Skin Contact	In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Section 5. Fire Fighting Measures

Flammability of the Product	Non-flammable.
Auto-ignition Temperature	Not applicable.
Flash Points	Not applicable.
Flammable Limits	Not applicable.
Products of Combustion	Not applicable.
Fire Hazards in Presence of Various Substances	Not applicable.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of static discharge: No.
Fire Fighting Media and Instructions	Risks of explosion of the product in presence of mechanical impact: No.
Protective Clothing (Fire)	Not applicable.
Special Remarks on Fire Hazards	Not available.
Special Remarks on Explosion Hazards	Not available.

Section 6. Accidental Release Measures

Small Spill and Leak	Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.
Large Spill and Leak	Absorb with an inert material and put the spilled material in an appropriate waste disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.
Spill Kit Information	No specific spill kit required for this product.

Section 7. Handling and Storage

**Handling
Storage**

Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.
Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8. Exposure Controls/Personal Protection

Engineering Controls Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits.

Personal Protection

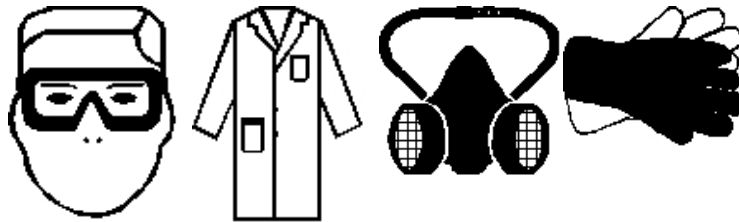
Eyes Splash goggles.

Body Lab coat.

Respiratory Vapor respirator. Be sure to use an approved/certified respirator or equivalent.

Hands Gloves.

Feet Not applicable.

**Protective
Clothing
(Pictograms)****Personal Protection in
Case of a Large Spill**

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Product Name

POTASSIUM IODIDE
IODINE

Exposure Limits

Not available.

ACGIH (United States, 1994).

CEIL: 1 mg/m³

OSHA (United States, 1989).

CEIL: 1 mg/m³

BAUA (Germany, 1997). Skin

MAK: 1 mg/m³

Spitzenbegrenzung: 1 mg/m³

Arbeidsinspectie (Netherlands, 1999).

TGG 8 uur: 1 mg/m³

MAC-C: 1 mg/m³

DK-Arbejdstilsynet (Denmark, 1996).

GV: 1 mg/m³

Loftværdi: 1 mg/m³

INRS (France, 1996).

VLE: 1 mg/m³

VLE: 0.1 ppm

National Authority for Occupational Safety/Health (Ireland, 1999).

STEL: 1 mg/m³

STEL: 0.1 ppm

EH40-OES (United Kingdom (UK), 1997).

STEL: 1.1 mg/m³

STEL: 0.1 ppm

ACGIH (United States, 1994).

CEIL: 1 mg/m³

CEIL: 0.1 ppm

NIOSH REL (United States, 1994).

CEIL: 1 mg/m³

CEIL: 0.1 ppm

OSHA Final Rule (United States, 1989).

CEIL: 1 mg/m³

CEIL: 0.1 ppm

Water

Not available.

Section 9. Physical and Chemical Properties

Odor	Pungent.
Color	Reddish-brown
Physical State and Appearance	Liquid.
Molecular Weight	Not applicable.
Molecular Formula	Not applicable.
pH	Not available.
Boiling/Condensation Point	The lowest known value is 99.9°C (211.8°F) (Water).
Melting/Freezing Point	May start to solidify at -0.1°C (31.8°F) based on data for: Water.
Specific Gravity	Not available.
Vapor Pressure	Not available.
Vapor Density	Not available.
Odor Threshold	Not available.
Evaporation Rate	0.36 (Water) compared to (n-BUTYL ACETATE=1)
LogKow	Not available.
Solubility	Soluble in water.

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Conditions of Instability	Not available.
Incompatibility with Various Substances	Not available.
Rem/Incompatibility	Not available.
Hazardous	Not available.
Decomposition Products	
Hazardous Polymerization	Will not occur.

Section 11. Toxicological Information

RTECS Number:	Potassium Iodide	TT2975000
	Iodine	NN1575000
	Water	ZC0110000
Toxicity	LD50: Not available.	
	LC50: Not available.	
Chronic Effects on Humans	Not available.	
Acute Effects on Humans	May be hazardous in case of eye contact (irritant). May be hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.	
Synergetic Products (Toxicologically)	Not available.	
Irritancy	Draize Test: Not available.	
Sensitization	Not available.	
Carcinogenic Effects	This material is not known to cause cancer in animals or humans.	
Toxicity to Reproductive System	Not available.	
Teratogenic Effects	Not available.	
Mutagenic Effects	Not available.	

Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Toxicity of the Products of Biodegradation	The product itself and its products of degradation are not toxic.

Section 13. Disposal Considerations

EPA Waste Number	Not available.
Treatment	Material does not have an EPA Waste number and is not a listed waste, however consultation with a permitted waste disposal site (TSD) should be accomplished. ALWAYS CONTACT A PERMITTED WASTE DISPOSER (TSD) TO ASSURE COMPLIANCE WITH ALL CURRENT LOCAL, STATE AND FEDERAL REGULATIONS.

Section 14. Transport Information

DOT Classification	Proper Shipping Name: CHEMICALS, N.O.S. RQ: Not applicable.
TDG Classification	Not available.
IMO/IMDG Classification	Proper Shipping Name: CHEMICALS, N.O.S. RQ: Not applicable.
ICAO/IATA Classification	Not available.

Section 15. Regulatory Information

U.S. Federal Regulations	TSCA 8(b) inventory: POTASSIUM IODIDE; IODINE; Water SARA 302/304/311/312 extremely hazardous substances: No products were found. SARA 302/304 emergency planning and notification: No products were found. SARA 302/304/311/312 hazardous chemicals: POTASSIUM IODIDE; IODINE SARA 311/312 MSDS distribution - chemical inventory - hazard identification: POTASSIUM IODIDE: Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard; IODINE: Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard SARA 313 toxic chemical notification and release reporting: No products were found. Clean Water Act (CWA) 307: No products were found. Clean Water Act (CWA) 311: No products were found. Clean air act (CAA) 112 accidental release prevention: No products were found. Clean air act (CAA) 112 regulated flammable substances: No products were found. Clean air act (CAA) 112 regulated toxic substances: No products were found.
WHMIS (Canada)	Not controlled under WHMIS (Canada). CEPA DSL: POTASSIUM IODIDE; IODINE; Water This product has been classified in accordance with the hazard criteria of the Controlled Product Regulations and the MSDS contains all required information.
International Regulations	
EINECS	POTASSIUM IODIDE 231-659-4 IODINE 231-442-4 Water 231-791-2
DSCL (EEC) International Lists	This product is not classified according to the EU regulations. Australia (NICNAS): POTASSIUM IODIDE; IODINE; Water Japan (MITI): POTASSIUM IODIDE; Water Korea (TCCL): POTASSIUM IODIDE; IODINE; Water Philippines (RA6969): POTASSIUM IODIDE; IODINE; Water

China: No products were found.
Pennsylvania RTK: IODINE: (generic environmental hazard)
Massachusetts RTK: IODINE
New Jersey: Gram Iodine - Diluted Solution
California prop. 65: No products were found.

State Regulations

Section 16. Other Information

**National Fire
Protection
Association
(U.S.A.)**

0 **Fire
Hazard**
0 0 **Health** **Reactivity**
**Specific
Hazard**

**Changed Since Last
Revision** +
Notice to Reader

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