



SAFETY DATA SHEET

SECTION 01 - IDENTIFICATION

Product Identifier	IODINE
Other identification (Chemical name, Commercial name, Synonymous)	IODINE; IODINE RESUBLIMED; IODINE CRYSTALS
Product code	IR-0103
Chemical formula	I ₂
Molar weight	253.81
Recommended use and Restrictions on use	For laboratory, school, commercial or industrial use. Not for medical or household use. Do not use for medical, food or household purposes.
Supplier	LABORATOIRE MAT 610, rue Adanac Québec Québec G1C 7B7 418-660-8666 Mon-Fri 8h-16h www.labmat.com labmat@labmat.com
Emergency phone	418-660-8666 Mon-Fri 8h-16h CENTRE ANTI-POISON DU QUÉBEC 800-463-5060
Date SDS	2026-01-23

SECTION 02 - HAZARDS IDENTIFICATION

WHIMS CANADA

- Skin corrosion/irritation - Skin irritation - category 2
- Serious eye damage/eye irritation - Eye irritation - category 2A
- Respiratory or skin sensitization - Skin sensitize - category 1
- Acute toxicity - Dermal - category 4
- Acute toxicity - Inhalation - category 4
- Specific Target Organ Toxicity - Repeated exposure - category 1
- Specific target organ toxicity - Single exposure - category 3

PICTOGRAMS



Signal Word

DANGER

Hazards statements (H)

- Causes skin irritation
- Causes serious eye irritation
- May cause an allergic skin reaction
- Harmful in contact with skin
- Harmful if inhaled
- Causes damage to the thyroid through prolonged or repeated exposure
- May cause respiratory irritation

Precautionary statements (P)

- IF ON SKIN: Wash with plenty of water
- If skin irritation occurs: Get medical attention.
- Take off contaminated clothing and wash before re-use.
- Wear protective gloves (nitrile, butyle, neoprene), protective clothing and eye and face protection.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- If eye irritation persists get medical attention.
- Avoid breathing mists, gases, vapors and other fumes, or the product itself.
- Contaminated work clothing should not be allowed out of the workplace.
- If skin irritation or a rash occurs: Get medical attention.
- Dispose of contents and container in accordance with local, regional and national regulations, or contact a specialist waste disposal company.
- Call a POISON CENTER or a doctor or if you feel unwell.
- Use only outdoors or in a well-ventilated area.
- IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
- Do not breathe mists, gases, vapors and other fumes, or the product itself.
- Do not eat, drink or smoke when using this product.
- Get medical attention if you feel unwell.
- Store in a well ventilated place. Keep container tightly closed.
- Store locked up.

Other dangers

NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Signifiant; 4=Extreme)

Health 3
Fire 0
Reactivity 0
Special danger

SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Component	No. CAS	% Weight
Iodine	7553-56-2	<=100%

SECTION 04 - FIRST AID MEASURE

Eye contact	Wash eyes with large amounts of water for at least 15 minutes while holding eyelids apart to rinse eyes. If irritation persists, seek medical attention.
Skin contact	Wash skin with plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation persists, seek medical attention.
Inhalation	Move the unwell person to the fresh air. If breathing is difficult, give oxygen. Consult a physician.
Ingestion	If the person is conscious, give water to drink. Never give anything by mouth to an unconscious person. Consult a physician.
Most important symptoms and effects (acute and delayed)	Main symptoms of high exposure: The product is a corrosive material. Skin, eye and respiratory system irritation. Tremors. Headaches. Diarrhea. Cardiac arrhythmia. Pulmonary edema. Sleep disorder. Pneumonia. Ref. section 11.
Immediate medical attention and special treatment, if necessary	Treat according to symptoms. Show this sheet to the attending physician.

SECTION 05 - FIREFIGHTING MEASURES

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	Do not use a jet of water.
Combustion products	Hazardous combustion products formed under fire conditions: Hydrogen iodide. Iodine vapors.
Specific hazards of the dangerous product	May react violently with incompatible products (Ref Section 10).
Special protective equipment and precautions for firefighters	Discard incompatible substances if this can be done without risk. Firefighters should be equipped with standard protective equipment, fireproof clothing, face mask, gloves, protective boots and, where appropriate, self-contained breathing apparatus.

SECTION 06 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency measures	Evacuate personnel to safe areas. When handling, wear appropriate safety equipment (reference Section 8 for protective equipment to be used). Ensure a good ventilation. Use NIOSH cartridge respiratory protection if necessary or for larger spills. Cut off all sources of ignition. Avoid dust formation. Avoid breathing dust.
Methods and materials for containment and cleaning up	Pick up with a shovel or broom, taking care not to scatter dust. Dispose of residues in a container for disposal of hazardous materials. When handling, wear suitable safety equipment. Discharge into the environment must be avoided.

SECTION 07 - HANDLING AND STORAGE

Conditions for safe storage	Hygroscopique Store in a cool, dry, and well-ventilated place. Keep container tightly closed and store away from heat, water, moisture, and incompatible products (ref. section 10). Protect from light and sunlight.
Methods of handling	Bottle in the glass only. This product is corrosive to metals. Avoid contact with eyes, skin and clothing. Avoid ingestion and inhalation. Wear personal protective equipment (ref. section 8) when handling. Always ensure good ventilation. Apply the usual standard hygiene rules: Wash your hands after use. Do not eat or drink during use.

SECTION 08 - EXPOSURE CONTROLS/PERSONAL PROTECTION

WORKPLACE CONTROL PARAMETERS

Components	CAS-No.	Control parameters	Value	Basis
Iodine	7553-56-2	C	0.1 ppm	Canada. British Columbia OEL
		TWA	0.01ppm	Canada. Ontario OELs
		STEL	0.1ppm	Canada. Ontario OELs
		(c)	0.1 ppm 1.0mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
Remarks	Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required			
		TWA	0.01 ppm	Quebec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		STEL	0.1ppm	Quebec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
	A substance which may not be recirculated in accordance with section 108			
		TWA	0.010000 ppm	Canada. British Columbia OEL
	Vapour and aerosol.			
		STEL	0.100000 ppm	Canada. British Columbia OEL
	Vapour and aerosol.			
		CEIL	0.100000 ppm 1.000000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		TWA	0.010000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		TWA	0.010000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		STEL	0.100000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		STEL	0.100000 ppm	USA. ACGIH Threshold Limit Values (TLV)

Data origin	Ontario Regulation 833. Alberta OELs. Worksafebc.com RSST. Sigma-Aldrich (Millipore Sigma)
Respiratory	If work under the hood is not possible, or if the permissible levels are exceeded, use NIOSH cartridge respiratory protection, or an air-supplied respirator. If permitted levels are exceeded, use NIOSH cartridge respiratory protection, or an air-supplied respirator.
Gloves	Handle with protective gloves. Suggested material: Nitrile. Butyl. Neoprene. The type, thickness and length of the glove must be chosen according to the use, the concentration of the product, as well as the duration of use. Replace gloves regularly for better protection.
Eyes	Safety goggles with safety shutters.
Shoes	Use safety shoes.
Clothes	Labcoat. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Engineering control	Use fan. Have safety showers and eyewash stations in the workplace in case of an emergency and a ventilation system to maintain the level of concentrations in the air below the exposure limit values. Recirculation is prohibited.

SECTION 09 - PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid
Color	Blue-violet to black
Odour	Acre
Odour threshold	0.9ppm
Melting point and freezing point	114°C
Boiling point	184°C
Flammability	No
Lower flammable / Explosive limit	Data not available
Upper flammable / Explosive limit	Data not available
Flash point	Data not available
Auto-ignition temperature	Data not available
Decomposition temperature	Data not available
pH	5.4
Kinematic viscosity	Not applicable
Solubility	Very slightly soluble in water (~0.3 g/l @20 °C)
Partition coefficient water/n-octanol	2.49
Vapour pressure	0,31 mm de Hg à 25 °C
Relative density	4.93g/cm ³ @20°C
Vapour density	9 (air=1)
Particle characteristics	Cystals to granules

SECTION 10 - STABILITY AND REACTIVITY

Reactivity	May react violently with incompatible substances. Oxidizer: risk of fire in case of contact with combustible or organic substance.
Chemical stability	Hygroscopic. Light sensitive.
Possibility of hazardous reactions	May react violently with incompatible substances.
Conditions to avoid	Avoid moisture. Avoid excessive heat. Avoid contact with incompatible materials.
Incompatible materials	Rubber. Various plastics. Iron. Ferrous salts. Sulfur. Sulfur compounds. Antimony salts. Arsenites. Oils. Ethanol. Formamide. Chlorine trifluoride. Bromine trifluoride. Can form an explosive mixture with: Ammonia. Acetylene. Metal azides. Violent reaction with: Reducing agents. Aluminium. Antimony. Acetylides. Carbides. Halogens. Sodium hydride. Alkali metals. Metal powders. Ignites with: Metallic hydrides. Metallic carbides. Alkaline earth metals.
Hazardous decomposition products	Hydrogen Iodide. Iodine vapors.

SECTION 11 - TOXICOLOGICAL INFORMATION

IODINE

Routes of exposure	Ingestion, inhalation and skin contact.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Causes serious eye damage.
- Skin	Severe burns and tissue ulcerations. Redness.
- Inhalation	Spasms. Irritation of the mucous membranes and respiratory tract. Edema of the larynx and bronchi. Chemical pneumonitis. Pulmonary edema. Breathing difficulties. Thyroid gland disorders.
Acute toxicity (Ingestion)	Burning of the mouth, throat, esophagus and abdominal wall. Dysphagia. Thyroid gland disorders. Abdominal pain. Cramps. Diarrhea. Melena. Hematemesis. Headaches. Salivation. Dizziness. Runny nose. Parotitis. Muscular weakness. Parotitis. Weight loss. Convulsions. Circulatory collapse. Loss of consciousness. Possible death.
Chronic exposure effects / symptoms	Burning sensation. Dermatitis. Conjunctivitis. Allergic reactions. Target organs: Thyroid gland. Nervous disorders. Chest pain. Cough. Dyspnoea. Rhinitis. Bronchitis Headache. Dizziness. Irritability. Hypersensitivity. Epiphora (excessive tearing). Erythema. Thirst. Salivation. Fatigue. Weakness. Weight loss. Loss of appetite. Convulsions. Nausea and vomiting. Prolonged exposure to this product is likely to cause embryotoxic effects in humans.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 315mg/kg. LD50 Dermal - Rabbit - 1425mg/kg.
CL50 (specify species and route of entry)	LC50 Inhalation - Rat - 4 h - > 4.588 mg/l.

SECTION 12 - ECOLOGICAL INFORMATION

IODINE

Ecotoxicity	Toxicity to fish: LC50 - Oncorhynchus mykiss (rainbow trout) - Static test - 1.7 mg/l - 96 h. Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna (Water flea) - 0.55mg/l - 48h.
Persistence and degradability	Persistence is unlikely based on information provided.
Bioaccumulative potential	Data not available.
Mobility in soil	Is not likely mobile in the environment due its low water solubility.
Other adverse effects	Data not available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal Method	Dispose of contents and container in accordance with local, regional and national regulations, or contact a specialist waste disposal company.
Contaminated Packaging	Dispose of as unused product.

SECTION 14 - TRANSPORT INFORMATION

UN Number	3495
UN Proper shipping name	IODE
Transport hazard class(es)	Matières corrosives 8 Matières toxiques 6.1
Packing group	III
Limited quantity index	5 kg
ERAP Index	-
Special precautions	43

SECTION 15 - REGULATORY INFORMATION

WHIMS CANADA	- Skin corrosion/irritation - Skin irritation - category 2 - Serious eye damage/eye irritation - Eye irritation - category 2A - Respiratory or skin sensitization - Skin sensitize - category 1 - Acute toxicity - Dermal - category 4 - Acute toxicity - Inhalation - category 4 - Specific Target Organ Toxicity - Repeated exposure - category 1 - Specific target organ toxicity - Single exposure - category 3
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SECTION 16 - OTHER INFORMATION

CNESST: Commission des normes, de l'équité et de la santé et sécurité au travail
NIH: National institute of health (U.S. National Library of Medicine)
ECHA: Agence Européenne de Chimie
ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
VECD: Valeur d'exposition courte durée
VEMP: Valeur d'exposition moyenne pondérée
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TLV : Threshold limit value
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling
RSST: Règlement sur la santé et sécurité au travail (Québec)
INRS: l'Institut national de recherche et de sécurité pour la prévention des accidents du travail et des maladies professionnelles (France)

The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. It does not represent any guarantee of the properties of the product. Laboratoire MAT Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

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