



## Material Safety Data Sheet

**Product Name: Sodium Iodide**

### Section 1-Product Information

**Formula** : NaI  
**Molecular weight** : 149.89  
**CAS No** : 7681-82-5  
**HS Code** : 28276020  
**Synonym's** : Sodium Iodine, Sodium monoiodide

### Section 2-Composition, Information on Ingredients

**Ingredient** : Sodium Iodide  
**Hazardous** : Yes  
**Percent** : 90-100%  
**Appearance** : White granular or colorless crystals

### Section 3-Hazards Identification

#### Emergency Overview

Warning! Harmful if swallowed or inhaled. Causes irritation to skin, eyes and respiratory tract. Chronic exposure may produce Iodism.

#### SAF-T-DATA Ratings (Provided here for your convenience):

**Health Rating** : 2 – Moderate (Life)  
**Flammability Rating** : 0 – None  
**Reactivity Rating** : 1 – Slight  
**Contact Rating** : 2 – Moderate  
**Lab protective Equip** : Goggles, Lab coat, Vent hood, Proper Gloves  
**Storage Color Code** : Green (General Storage)

#### Potential Health Effects

**Eye contact** : Causes irritation, redness and pain.

**Skin contact**: Causes irritation to skin. Symptoms include redness, itching and pain.

**Ingestion** : Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea.

**Inhalation** : Inhalation of dust may cause coughing, choking with variable symptoms of headache, dizziness, and weakness. May cause lung edema.

**Chronic Exposure**: A mild toxic syndrome "iodism" may result from chronic iodide overdoses. May cause salivation, sneezing, conjunctivitis, headache, fever, laryngitis, bronchitis, stomatitis, and parotitis (iodine mumps). Prolonged or repeated skin exposure may cause skin rashes.

**Aggravation of Pre-existing conditions**: No information found.



#### Section 4-First Aid Measure

**Eyes** : Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

**Skin** : Wipe off excess material from skin then immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

**Ingestion** : Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person.

**Inhalation** : Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

#### Section 5-Fire Fighting Procedure

**Fire** : Not considered to be fire hazard.

**Explosion** : Not considered to be an explosion hazard.

**Fire Extinguishing Media:** Use any means suitable for extinguishing surrounding fire.

**Special Information** : In the event of a fire, wear full protective clothing and NIOSH-approved self contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

#### Section 6-Accidental Release Measure

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in section 8. Spills: Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust. Small amounts of residue may be flushed to sewer with plenty of water.

#### Section 7-Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Protect from light. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

#### Section 8-Exposure control/Personal protection

##### **Airborne Exposure Limits:**

-ACGIH (TWA) for Iodides:

0.01 ppm for inhalable fraction and vapor.

**Ventilation System:** A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

**Personal Respirators (NIOSH Approved):** For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.



**Skin Protection:** Wear protective gloves and clean body-covering clothing.

**Eye Protection:** Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

### Section 9-Physical Chemical Properties

<b>Appearance</b>	: White granular or colorless crystals
<b>Odor</b>	: Odorless.
<b>Solubility</b>	: 184 g/100 ml water @ 25C
<b>Specific Gravity</b>	: 3.67
<b>pH</b>	: 8 - 9.5
<b>% Volatiles by volume @ 21C (70F)</b>	: 0
<b>Boiling Point</b>	: 1300 °C (2372 °F)
<b>Melting Point</b>	: 651 °C (1204 °F)
<b>Vapor Density (Air=1)</b>	: No information found.
<b>Vapor Pressure (mm Hg)</b>	: 1 @ 767C (1413F)
<b>Evaporation Rate (BuAc=1)</b>	: No information found.

### Section 10-Stability and Reactivity

**Stability:** Stable under ordinary conditions of use and storage. Absorbs up to 5% moisture on exposure to air and becomes brown due to liberation of iodine.

**Hazardous Decomposition Products:** When heated to decomposition it emits toxic fumes of iodine and sodium oxide.

**Hazardous Polymerization:** Will not occur.

**Incompatibilities:** Alkali metals, chloral hydrate, acids tartaric acid, potassium chlorate, metallic salts, iodine. Reacts violently with bromide trifluoride, perchloric acid, and oxidants.

**Conditions to Avoid:** Light and incompatibles.

### Section 11-Toxicity Information

**Toxicological Data:** Oral rat LD50: 4340 mg/kg. Irritation data: skin rabbit, standard Draize: 500 mg/24H, moderate; eye rabbit, standard Draize: 100 mg/24H, moderate. Investigated as a reproductive effector.

**Reproductive Toxicity:** The occasional use of iodides for asthma in pregnancy has resulted in fetal death, severe goiter and cretanoid appearance of the newborn.

Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
Sodium Iodide (7681-82-5)	No	No	None



## Section 12-Ecological Information

**Environmental Fate:** No information found.

**Environmental Toxicity:** No information found.

## Section 13-Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

## Section 14-Transport Information

Not regulated.

## Section 15-Regulatory Information

-----\Chemical Inventory Status - Part 1\-----				
Ingredient	TSCA	EC	Japan	Australia
-----				
Sodium Iodide (7681-82-5)	Yes	Yes	Yes	Yes

-----\Chemical Inventory Status - Part 2\-----				
--Canada--				
Ingredient	Korea	DSL	NDSL	Phil.
-----				
Sodium Iodide (7681-82-5)	Yes	Yes	No	Yes

-----\Federal, State & International Regulations - Part 1\-----				
Ingredient	-SARA 302-		-----SARA 313-----	
	RQ	TPQ	List	Chemical Catg.
-----				
Sodium Iodide (7681-82-5)	No	No	No	No

-----\Federal, State & International Regulations - Part 2\-----				
Ingredient	-RCRA-		-TSCA-	
	CERCLA	261.33	8(d)	
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Sodium Iodide (7681-82-5)	No	No	No	

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No  
 SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No  
 Reactivity: No (Pure / Solid)

**Australian Hazchem Code:** None allocated.

**Poison Schedule:** None allocated.

**WHMIS:**

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.



## Section 16-Additional Information

**NFPA Ratings:** Health: **2** Flammability: **0** Reactivity: **1**

**Label Hazard Warning:**

WARNING! HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. CHRONIC EXPOSURE MAY PRODUCE IODISM.

**Label Precautions:**

Avoid contact with eyes, skin and clothing.  
Avoid breathing dust.  
Keep container closed.  
Use only with adequate ventilation.  
Wash thoroughly after handling.

**Label First Aid:**

In case of contact, wipe off excess material from skin then immediately flush eyes or skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. In all cases, get medical attention.

**Product Use:**

Laboratory Reagent.

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