



Sodium Iodide CAS No.7681-82-5

1. Chemical Product Identification

Common name/synonyms: Sodium iodine, sodium salt, Sodium monoiodide

CAS#: 7681-82-5

Molecular Weight: 149.89

Chemical Formula: NaI

2. Composition/Information on Ingredients

Ingredient CAS No. Percent Hazardous

Sodium Iodide 7681-82-5 98-100% Yes

3. Hazards Identification/Health Effects

EMERGENCY OVERVIEW

Caution! May cause irritation to the skin, eyes and respiratory tract. Upon decomposition or heating, iodine vapor is released which is highly toxic. Chronic exposure may cause iodism.

Routes of entry:

Skin Contact

Yes

Skin Absorption

Yes

Eye Contact

Yes

Inhalation

Yes

Ingestion

Yes

Health Effects:

Exposure Limits

No
Irritant
Yes
Sensitization
Yes
Teratogen
No
Reproductive Hazard
No
Mutagen
No

Potential Health Effects

Eye Contact: May cause irritation, redness and pain.

Skin Contact: May cause irritation with redness and pain.

Ingestion: Large oral doses may cause irritation to the gastrointestinal tract.

Inhalation: May cause irritation to the respiratory tract. Symptoms may include coughing and shortness of breath.

Chronic Exposure/Target Organs: Chronic ingestion of iodides may produce "iodism", which may be manifested by skin rash, running nose, headache and irritation of the mucous membranes. Weakness, anemia, loss of weight and general depression may also occur.

Aggravation of Pre-existing Conditions: No information found.

NFPA HAZARD CODES HMIS HAZARD CODES RATINGS SYSTEM

Health: 1 Health: 1 0= No Hazard

Flammability: 0 Flammability: 0 1= Slight Hazard

Reactivity: 0 Reactivity: 0 2= Moderate Hazard

3= Serious Hazard

4= Severe Hazard

4. First Aid Measures

Eyes: Flush with copious amounts of water for 15 minutes, occasionally lifting the upper and

lower lids. SEEK MEDICAL ATTENTION if irritation persists.

Skin: Wash skin with copious amounts of water and soap for 15 minutes while removing any

contaminated clothing and shoes. SEEK MEDICAL ATTENTION if irritation persists.

Ingestion: Induce vomiting immediately as directed by medical personnel. Never give

anything by mouth to an unconscious person. SEEK MEDICAL ATTENTION IMMEDIATELY.

Inhalation: Remove from exposure to fresh air immediately. If not breathing, give artificial

respiration. If breathing is difficult, give oxygen. SEEK MEDICAL ATTENTION IMMEDIATELY.

5. Fire Fighting Measures

Flash Point: No data **Method:** N/A

LEL % : No data **Auto-ignition:** N/A

UEL % : No data

FIRE AND EXPLOSION HAZARDS : Not combustible.

EXTINGUISHING MEDIA: Use dry powder or carbon dioxide extinguishers. Water spray may be

used to keep fire-exposed containers cool. Keep water use to a minimum.

FIRE FIGHTING INSTRUCTIONS:

Small Fires: Dry chemical, CO₂ or alcohol-resistant foam.

Large Fires: Dry chemical, CO₂ or alcohol-resistant foam. Move containers from area if you can

without risk. Dike fire control water for later disposal. Do not scatter material.

6. Accidental Release Measures

Evacuation: Notify safety personnel of iodide spills or leaks. Ventilate and isolate hazard area.

Keep unnecessary and unprotected personnel from entering. Wear proper protective equipment.

Collect and containerize as much solid product as possible.

Containment: Eliminate all ignition sources. Do not touch damaged containers or spilled material

unless wearing appropriate protective clothing. Stop leak if you can do without risk. Prevent entry

into waterways, sewers, basements or confined areas.

Reporting: In the event of a Hazardous Materials Incident during transportation, the

regulations in 49CFR 171.5 and 171.16 are to be followed. Under 40CFR 302.6 (CERCLA), any

release of a substance in a quantity equal to or greater than its threshold amount to soil, water or

air, must be reported to the US Coast Guard National Response Center at 800-424-8801, as soon

as that person has knowledge of the release.

7. Handling and Storage

Storage Conditions: Store in a cool, dry, well-ventilated area away from incompatible

substances. Keep containers tightly closed and away from sources of heat or ignition. Prolonged

storage is not recommended because of possible degradation problems and caking or hardening of

material. Sodium Iodide is hygroscopic. Containers of this material may be hazardous when empty

since they contain product residue.

8. Exposure Controls/Personal Protection

Substance (CAS NO.) ACGIH- TLV ACGIH- STEL OSHA- PEL OSHA- STEL

Sodium Iodide (7681-82-5) Not Established

Engineering Controls/Ventilation: Use appropriate engineering controls to reduce air contamination to approved or permissible standards. Where such systems are not effective, wear suitable personal protective equipment which performs satisfactorily and meets local/national standards.

Eye/Face Protection: Wear appropriate protective eyeglasses or chemical safety goggles as described in OSHA's 29 CFR 1910.133 Eye and Face Protection Standard. Maintain eye wash fountain and quick-drench facilities in work area.

Skin Protection: Gloves and apron. Glove selection guides should be consulted.

Respiratory Protection: If the exposure limit is exceeded, a half-face dust/mist respirator may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece dust/mist respirator may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, which ever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece positivepressure, air-supplied respirator.

9. Physical and Chemical Properties

PARAMETER

Physical state (gas, liquid, solid)	White crystalline solid
Odor	Odorless
Density	3.67
Vapor pressure	No information found
Vapor density (Air=1)	N/A
Evaporation	N/A
Boiling Point	1300 °C
pH	8-9.5 (saturated solution)
Solubility	Very soluble (184 g/100g water)
Melting Point	651 °C

Note: The physical data presented above are typical values and should not be construed as a specification.

10. Stability and Reactivity

Stability: Stable under ambient temperatures and pressures. Absorbs up to 5% moisture in a

air and becomes brown due to liberation of iodine. Conditions to avoid are air, light and incompatibles. When heated and upon decomposition, it emits toxic fumes of iodine and sodium oxide.

Incompatible Materials: Alkali metals, chloral hydrate, acids, tartaric acid, potassium chlorate, metallic salts, iodine. Reacts violently with bromide trifluorides, perchloric acid and oxidants.

Hazardous Polymerization: Will not occur.

11. Toxicological Information

Substance (CAS No.) Route(s) of Entry Value Critical Effects

Sodium Iodide (7681-82-5) LD₅₀ oral (rat) 4340 mg/kg Irritation, CNS
LD₅₀ intra (rat) 1060 mg/kg

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

12. Ecological Information

Terrestrial Fate: No information found

Aquatic Fate: No information found

13. Disposal Considerations:

Dispose of in a manner consistent with federal, state and local regulations. RCRA- This material does not meet the criteria for RCRA F, P or U-series waste codes. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements.

14. Transport Information

SHIPPING CRITERIA US DOT IATA

Proper Shipping Name Not Regulated Not Regulated

Hazard Class

Identification Number

Packing Group

Shipping Label

Additional Marking

Requirement

15. Regulatory Information

OSHA: This material is not considered Z-1 Hazardous Toxic Material or under 29CFR

1910.119 Process Safety Management.

EPA: Clean Air Act- This material is not a Hazardous Air Pollutant (HAP), or a Class1

or 2 Ozone Depletor.

Clean Water Act- This material is not listed as a Hazardous Substance, Priority Pollutant and as a Toxic Pollutant.

TSCA- This material is listed on the Public Inventory.

Advise your state agencies, SEPC and LEPC for regulations if applicable.

16. Other Information

Users Responsibility: A bulletin such as this cannot be expected to cover all possible individual situations. As the user has the responsibility to provide a safe workplace, all aspects of an individual operation should be examined to determine if, or where, precautions are required. Any health hazard and safety information herein should be passed on to your customers or employees.

Disclaimer of Liability: The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results and assume no liability for damages incurred by use of this material. All chemicals may present unknown health hazards are described herein, we cannot guarantee that these are the only hazards which exist. Final determination of suitability of the chemical is the sole responsibility of the user. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose or any other nature are made hereunder with respect to the information contained herein or the chemical to which the information refers. It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations.

SDS Code: 113.04, 113.14, 113.15, 113.24, 113.34

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