



## Cuprous Iodide CAS No.7681-65-4

### 1. Chemical Product Identification

<b>Common name/synonyms</b>	: Copper Iodide, Cupric Iodide
<b>CAS#</b>	: 7681-65-4
<b>Molecular Weight</b>	: 190.45
<b>Chemical Formula</b>	: CuI

### 2. Composition/Information on Ingredients

Ingredient	CAS No.	Percent Hazardous
Cuprous Iodide	7681-65-4	98-100% Yes

### 3. Hazards Identification/Health Effects

**Caution!** May cause irritation to the skin, eyes and respiratory tract. Upon decomposition or heating, iodine vapor is released which is highly toxic. The toxicological properties of this substance have not been fully investigated.

#### 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.

Chronic skin contact

may cause permanent discoloration of the skin.

**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, CO<sub>2</sub> or alcohol-resistant foam.

**Large Fires:** Dry chemical, CO<sub>2</sub> 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 iodine or 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 or caking. Containers of this material may be hazardous when empty since they contain product residue.

**Handling:** Individual copper compounds should be evaluated on a case-by-case basis to determine if additional handling procedures for highly toxic substances are appropriate.

## 8. Exposure Controls/Personal Protection

**Substance ( CAS NO.) ACGIH- TLV ACGIH- STEL OSHA- PEL OSHA- STEL**  
Cuprous Iodide (7681-65-4) 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:** Avoid breathing dusts. Follow OSHA 29CFR 1910.134 Respirator Protection Standard and wear NIOSH/MSHA-approved equipment when exposure limits are exceeded.

## 9. Physical and Chemical Properties

### PARAMETER

<b>Physical state (gas, liquid, solid)</b> .....	White to brownish-yellow powder
<b>Odor</b> .....	Slight metallic
<b>Specific Density</b> .....	5.65
<b>Vapor pressure</b> .....	N/A
<b>Vapor density (Air=1)</b> .....	N/A
<b>Evaporation</b> .....	N/A
<b>Boiling Point</b> .....	1290 °C
<b>pH</b> .....	N/A
<b>Solubility</b> .....	Insoluble in water, soluble in potassium iodide
<b>Melting Point</b> .....	606 °C

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

5

## 10. Stability and Reactivity

**Stability:** Stable under ambient temperatures and pressures. Conditions to avoid are high temperatures, light and dust generation.

**Incompatible Materials:** Contact of copper compounds with acetylene may cause formation of cuprous acetylide, which is a shock-sensitive explosive. Contact with ammonia may cause formation of compounds that are explosive when dry. Contact with strong hydrogen peroxide solutions causes violent decomposition with the formation of oxygen gas.

**Hazardous Polymerization:** Will not occur.

## 11. Toxicological Information

**Substance (CAS No.) Route(s) of Entry Value Critical Effects**  
Cuprous Iodide (7681-65-4) No information found Irritation

## 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 Class 1

or 2 Ozone Depletor.

Clean Water Act- This material is not listed as a Hazardous Substance. CAS# 7681-65-4 is listed as a Priority Pollutant and as a Toxic Pollutant.

TSCA- This material is listed on the Public Inventory.

SARA Title III- This material contains copper, which is subject to reporting requirements of Section 313.

**European:** EINECS Number- 231-674-6

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.

**MSDS Code: 106.44**

[www.sparchem.com](http://www.sparchem.com)