

**SECTION 1: Identification**

|                             |  |  |
|-----------------------------|--|--|
| <b>Product Name</b>         | Iodine, ACS  |  |
| <b>Other Identifiers</b>    | Diiodine; 84410-33   |  |
| <b>Recommended Uses</b>     | General use.   |  |
| <b>Uses Advised Against</b> | Not intended for drug, food or household use.                      |  |
| <b>Address</b>              | SPEX CertiPrep, LLC<br>203 Norcross Ave.<br>Metuchen, NJ 08840 USA | <b>24-Hour Emergency Telephone</b><br>CHEMTREC (USA) 800-424-9300<br>CHEMTREC (International) 1 + 730-527-3887 |
| <b>Telephone</b>            | 1.732.549.7144   |  |
| <b>Website</b>              | www.spex.com   |  |

**SECTION 2: Hazard(s) Identification**

- Acute toxicity Dermal (Category 4)
- Acute toxicity Inhalation (Category 4)
- Hazardous to the aquatic environment, short-term (Category Acute 1)

**Hazards not otherwise classified or covered by GHS**

None identified.

**Signal Word**

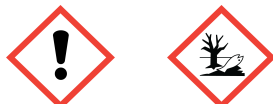
Warning

**Hazard Statements**

Very toxic to aquatic life. Harmful if in contact with skin or if inhaled.

**Precautionary Statements**

Avoid breathing dust. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves and clothing and eye protection. IF ON SKIN: Wash with plenty of water. Get medical help. Take off contaminated clothing and wash it before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help. Collect spillage. Dispose of contents/container in accordance with local, state, federal and international regulations.



**SECTION 3: Composition / Information on Ingredients**

| Component Name | Component Number CAS | Component Number EC | Component Weight % |
|----------------|----------------------|---------------------|--------------------|
| Iodine         | 7553-56-2            | 231-442-4           | 100                |

## SECTION 4: First-Aid Measures

|                         |   |
|-------------------------|---|
| <b>General Advice</b>   | Show this SDS to attending physician if medical treatment is needed.  |
| <b>Skin Contact</b>     | Immediately flush affected area with plenty of water while removing contaminated clothing . Seek medical attention if you are concerned or feel unwell.   |
| <b>Eye Contact</b>      | Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing. If irritation persists, seek medical attention.  |
| <b>Inhalation</b>       | Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center or physician. Ensure that the patient/victim has an unobstructed airway. If shortness of breath occurs or breathing is difficult, administer oxygen. If breathing has ceased provide artificial respiration. Always use a barrier or bag-valve-mask device. DO NOT GIVE MOUTH-TO-MOUTH RESPIRATION. |
| <b>Ingestion</b>        | Rinse mouth. Seek medical attention if feeling unwell.  |
| <b>Symptoms/effects</b> | The most important known symptoms/effects are described in Section 2 of this Safety Data Sheet.   |
| <b>Treatment</b>        | Treat symptomatically.  |

## SECTION 5: Fire-Fighting Measures

|                                 |  |
|---------------------------------|--|
| <b>Extinguishing Media</b>      | Substance is not flammable, use agent most appropriate to extinguish surrounding fire (water, carbon dioxide, dry chemical, sand/earth, foam).                           |
| <b>Specific Hazards</b>         | Thermal decomposition may produce toxic or irritating fumes.   |
| <b>Actions for Firefighters</b> | 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 Measures

|                                   |  |
|-----------------------------------|--|
| <b>Precautions and Procedures</b> | Ensure adequate ventilation. Use personal protective equipment as required. Evacuate unprotected personnel to safe areas. Keep people away from and upwind of spill/leak.                |
| <b>Environmental Precautions</b>  | Take all precautions to avoid release to the environment .   |
| <b>Containment and Clean Up</b>   | Avoid dust formation. Wear respiratory protection, gloves, eye protection and protective clothing. Sweep up or vacuum up spillage and collect in suitable lidded container for disposal. |

## Section 7: Handling and Storage

|                 |   |
|-----------------|---|
| <b>Handling</b> | Follow good hygiene procedures when handling chemical materials. Avoid contact with skin, eyes and clothing. Do not eat, drink, smoke or use personal items when handling this substance. Wear gloves, protective clothing and eye protection when handling this substance. |
| <b>Storage</b>  | Keep containers tightly closed in a cool, dry and well-ventilated place. Protect from freezing and physical damage. Store separately from incompatible materials.   |

## Section 8: Exposure Controls / Personal Protection

|                               |  |
|-------------------------------|--|
| <b>Engineering Controls</b>   | As part of safe chemical handling, emergency eye wash fountains and safety showers should be available in handling areas. Provide sufficient ventilation measures to keep the airborne concentration below the applicable workplace exposure limits. |
| <b>Exposure Limits</b>        | Iodine PEL-Ceiling 1 mg/m <sup>3</sup> US-OSHA   |
| <b>Exposure Limits</b>        | Iodine REL-Ceiling 0.1 ppm US-NIOSH  |
| <b>Exposure Limits</b>        | Iodine TLV-TWA 0.01 ppm US-ACGIH   |
| <b>Exposure Limits</b>        | Iodine TLV-STEL 0.1 ppm US-ACGIH   |
| <b>Eye Protection</b>         | Wear safety glasses with side shields or safety goggles. Wear face shield if there is risk of splashes.  |
| <b>Skin Protection</b>        | Wear chemical resistant gloves and protective clothing.  |
| <b>Respiratory Protection</b> | Where exposure limits are exceeded and cannot be adequately controlled by other engineering means (such as a chemical fume hood), wear respiratory protection.   |

## Section 9: Physical and Chemical Properties

|                                   |                    |
|-----------------------------------|--------------------|
| <b>Physical State</b>             | Solid              |
| <b>Appearance/Color</b>           | Violet-black       |
| <b>Odor</b>                       | Antiseptic, sharp  |
| <b>Odor Threshold</b>             | 1 ppm              |
| <b>Melting/Freezing Point</b>     | 114°C              |
| <b>Boiling Point/Range</b>        | 184°C              |
| <b>Flammability</b>               | Not flammable      |
| <b>Flammable/Explosive Limits</b> | Not applicable     |
| <b>Flash Point</b>                | Not applicable     |
| <b>Auto-Ignition Temperature</b>  | Not applicable     |
| <b>Decomposition Temperature</b>  | Data not available |
| <b>pH</b>                         | Data not available |
| <b>Viscosity</b>                  | 2.27 cP at 116°C   |

|  |                    |
|--|--------------------|
| <b>Solubility (in water)</b>                   | 0.3 g/L at 20°C    |
| <b>Partition Coefficient (n-octanol/water)</b> | 2.49               |
| <b>Relative Density</b>                        | 4.93               |
| <b>Vapor Pressure</b>                          | 0.04 kPa at 25°C   |
| <b>Vapor Density</b>                           | 8.75               |
| <b>Evaporation Rate</b>                        | Not applicable.    |
| <b>Particle Characteristics</b>                | Data not available |

### Section 10: Stability and Reactivity

|                                |   |
|--------------------------------|---|
| <b>Reactivity</b>              | Based on available data, no reaction hazards have been identified.  |
| <b>Chemical Stability</b>      | Stable under normal conditions of handling and storage.   |
| <b>Hazardous Reactions</b>     | Based on available data, no reaction hazards have been identified that would occur during normal handling and storage.  |
| <b>Conditions to Avoid</b>     | Avoid contact with incompatible materials.  |
| <b>Incompatible Materials</b>  | Ethanol, formamide, chlorine, bromine, bromine trifluoride, chlorine trifluoride. Reacts vigorously with reducing materials. Incompatible with powdered metals in the presence of water (ignites), with gaseous or aqueous ammonia (forms explosive products), with acetylene (reacts explosively), with acetaldehyde (violent reaction), with metal azides (forms yellow explosive iodoazides), with metal hydrides (ignites), with metal carbides (ignites easily), with potassium and sodium (forms shock-sensitive explosive compounds) and with alkali-earth metals (ignites). |
| <b>Hazardous Decomposition</b> | Thermal decomposition can produce iodine vapors.  |

### Section 11: Toxicological Information

|                                    |  |
|------------------------------------|--|
| <b>Acute Toxicity - Oral</b>       | LD50 (rat) 14000 mg/kg   |
| <b>Acute Toxicity - Dermal</b>     | The toxicological data is limited or unavailable.  |
| <b>Acute Toxicity - Inhalation</b> | LCLo (rat) 80 ppm/1H   |
| <b>Skin Corrosion/Irritation</b>   | Harmful in contact with skin.  |
| <b>Eye Damage/Irritation</b>       | This material is not expected to cause eye damage or irritation under normal usage conditions.                                     |
| <b>Respiratory Sensitization</b>   | Not expected to cause respiratory sensitization.   |
| <b>Skin Sensitization</b>          | Not expected to cause skin sensitization.  |
| <b>Germ Cell Mutagenicity</b>      | Based on available data, this substance does not meet the criteria set forth for classification as causing germ cell mutagenicity. |
| <b>Carcinogenicity</b>             | This material has not been identified as a carcinogen by IARC or NTP.  |
| <b>Reproductive Toxicity</b>       | Based on available data, this substance does not meet the criteria set forth for classification as a reproductive toxin.           |
| <b>STOT Single Exposure</b>        | None known.  |
| <b>STOT Repeated Exposure</b>      | None known.  |
| <b>Aspiration Hazard</b>           | This substance is not considered to be an aspiration hazard.   |
| <b>Other Information</b>           | No additional information available.   |

## Section 12: Ecological Information

|                                     |  |
|-------------------------------------|--|
| <b>Toxicity Values</b>              | LC50 (Lepomis macrochirus) 37 ppm/96H  |
| <b>Persistence/Biodegradability</b> | The methods for determining biological degradability do not apply to inorganic substances. |
| <b>Bioaccumulation Potential</b>    | Data is not available for this substance that does not meet the criteria of ecotoxin.      |
| <b>Mobility in Soil</b>             | Data is not available for this substance that does not meet the criteria of ecotoxin.      |
| <b>Other Adverse Effects</b>        | None known.  |

## Section 13: Disposal Considerations

Discharge, treatment, or disposal may be subject to national, state, regional or local laws. Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Since emptied containers retain product residue, follow label warnings even after container is emptied. Dispose in accordance with national, state, regional and local regulations.

## Section 14: Transport Information

|   |                                       |
|---|---------------------------------------|
| <b>UN Number</b>                          | UN3495                                |
| <b>Proper Shipping Name, Hazard Class</b> | IODINE, 8 (6.1)                       |
| <b>Packing Group</b>                      | III                                   |
| <b>Marine Pollutant</b>                   | Not classified as a marine pollutant. |

## Section 15: Regulatory Information

|                                  |  |
|----------------------------------|--|
| <b>USA TSCA</b>                  | On or in compliance with the inventory.          |
| <b>USA SARA 302/304</b>          | Does not apply.                                  |
| <b>USA SARA 311/312</b>          | Does not apply.                                  |
| <b>USA SARA 313 (TRI)</b>        | Does not apply.                                  |
| <b>Canada DSL/NDSL</b>           | On or in compliance with DSL.                    |
| <b>California Proposition 65</b> | This product contains no substances on the list. |

## Section 16: Other Information

|                 |        |  |
|-----------------|--------|--|
| <b>Acronyms</b> | ACGIH  | American Conference of Governmental Industrial Hygienists (USA)            |
|                 | ATE    | Acute Toxicity Estimate (calculated toxicity value)                        |
|                 | BCF    | Bioconcentration Factor  |
|                 | CERCLA | Comprehensive Environmental Response, Compensation and Liability Act (USA) |
|                 | DOT    | Department of Transportation (USA)   |
|                 | DSL    | Domestic Substances List (Canada)  |
|                 | EHS    | Extremely Hazardous Substance  |
|                 | EPA    | Environmental Protection Agency (United States)                            |
|                 | GHS    | Globally Harmonized System   |
|                 | IARC   | International Agency for Research on Cancer                                |
|                 | IDLH   | Immediately Dangerous to Life and Health                                   |
|                 | NTP    | National Toxicology Program (USA)  |
|                 | OSHA   | Occupational Safety and Health Administration (USA)                        |
|                 | PEL    | Permissible Exposure Limit   |
|                 | PNOR   | Particulates Not Otherwise Classified                                      |
|                 | PPE    | Personal Protective Equipment  |
|                 | ppb    | Parts per billion  |
|                 | ppm    | Parts per million  |
|                 | RQ     | Reportable Quantity  |
|                 | SARA   | Superfund Amendments and Reauthorization Act (USA)                         |
|                 | TLV    | Threshold Limit Value  |
|                 | TPQ    | Threshold Planning Quantity  |
|                 | TRI    | Toxic Release Inventory (USA)  |
|                 | TSCA   | Toxic Substances Control Act (USA)   |
|                 | TWA    | Time Weighted Average  |
|                 | UN     | United Nations   |

**Revision Date** 03/30/22 **Issue Date:** 3/30/2022

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Department issuing SDS:** product safety department

**Contact:** SPEX CertiPrep, LLC. 1-732-549-7144