



Material Safety Data Sheet

NFPA	HMIS	Personal Protective Equipment						
	<table border="1" style="margin: auto;"> <tr> <td style="background-color: #00FFFF;">Health Hazard</td> <td style="text-align: center; border: 1px solid black;">2</td> </tr> <tr> <td style="background-color: #FFCCCC;">Fire Hazard</td> <td style="text-align: center; border: 1px solid black;">0</td> </tr> <tr> <td style="background-color: #FFFF00;">Reactivity</td> <td style="text-align: center; border: 1px solid black;">0</td> </tr> </table>	Health Hazard	2	Fire Hazard	0	Reactivity	0	 See Section 15.
Health Hazard	2							
Fire Hazard	0							
Reactivity	0							

Section 1. Chemical Product and Company Identification		Page Number: 1										
Common Name/Trade Name	Iodine (Iodine-Iodide), SVS Concentrate, To Prepare 0.01 N Solution	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Catalog Number(s).</td> <td>SV095</td> </tr> <tr> <td>CAS#</td> <td>Mixture.</td> </tr> <tr> <td>RTECS</td> <td>Not applicable.</td> </tr> <tr> <td>TSCA</td> <td>TSCA 8(b) inventory: Iodine; Potassium Iodide; Hydrochloric acid; Water</td> </tr> <tr> <td>CI#</td> <td>Not applicable.</td> </tr> </table>	Catalog Number(s).	SV095	CAS#	Mixture.	RTECS	Not applicable.	TSCA	TSCA 8(b) inventory: Iodine; Potassium Iodide; Hydrochloric acid; Water	CI#	Not applicable.
Catalog Number(s).	SV095											
CAS#	Mixture.											
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TSCA	TSCA 8(b) inventory: Iodine; Potassium Iodide; Hydrochloric acid; Water											
CI#	Not applicable.											
Manufacturer	SPECTRUM CHEMICAL MFG. CORP. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	IN CASE OF EMERGENCY CHEMTREC (24hr) 800-424-9300 CALL (310) 516-8000										
Commercial Name(s)	Not available.											
Synonym	Not available.											
Chemical Name	Not applicable.											
Chemical Family	Oxidizing agent.											
Chemical Formula	Not applicable.											
Supplier	SPECTRUM CHEMICAL MFG. CORP. 14422 S. SAN PEDRO STREET GARDENA, CA 90248											

Section 2. Composition and Information on Ingredients					
Name	CAS #	Exposure Limits			% by Weight
		TWA (mg/m ³)	STEL (mg/m ³)	CEIL (mg/m ³)	
1) Iodine	7553-56-2			0.1	1.4
2) Potassium Iodide	7681-11-0			4	4
3) Hydrogen chloride	7647-01-0	7.5		5	0.0037
4) Water	7732-18-5				94.6

Toxicological Data on Ingredients	Iodine: ORAL (LD50): Acute: 14000 mg/kg [Rat]. Potassium Iodide LD50: Not available. LC50: Not available.
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Section 3. Hazards Identification

Potential Acute Health Effects	Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion. Slightly hazardous in case of inhalation.
Potential Chronic Health Effects	CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to thyroid. The substance may be toxic to blood, kidneys, liver, cardiovascular system, upper respiratory tract, skin, eyes, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4. First Aid Measures

Eye Contact	Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.
Skin Contact	If the chemical got onto the clothed portion of the body, remove the contaminated clothes as quickly as possible, protecting your own hands and body. Place the victim under a deluge shower. If the chemical got on the victim's exposed skin, such as the hands : Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cold water may be used. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.
Serious Skin Contact	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.
Inhalation	Allow the victim to rest in a well ventilated area. Seek immediate medical attention.
Serious Inhalation	Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.
Ingestion	Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.
Serious Ingestion	Not available.

Section 5. Fire and Explosion Data

Flammability of the Product	Non-flammable.
Auto-Ignition Temperature	Not applicable.
Flash Points	Not applicable.
Flammable Limits	Not applicable.
Products of Combustion	Not available.
Fire Hazards in Presence of Various Substances	Not applicable.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.
Fire Fighting Media and Instructions	Not applicable.
Special Remarks on Fire Hazards	Not available.
Special Remarks on Explosion Hazards	Not available.

Section 6. Accidental Release Measures

Small Spill Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill Oxidizing material.
Stop leak if without risk. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Prevent entry into sewers, basements or confined areas, dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7. Handling and Storage

Precautions Keep container dry. Keep away from heat. Keep away from sources of ignition. Keep away from combustible material. Do not ingest. Do not breathe gas/fumes/vapour/spray. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids.

Storage Oxidizing materials should be stored in a separate safety storage cabinet or room.

Section 8. Exposure Controls/Personal Protection

Engineering Controls Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the workstation location.

Personal Protection Splash goggles. Lab coat. Gloves.
Respiratory protection is not necessary for normal handling. Adequate general (room) ventilation or local exhaust (fume hood) is sufficient. Use a vapor respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapor, inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.

Personal Protection in Case of a Large Spill Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits
Iodine
STEL: 1 (mg/m³) from ACGIH (TLV) [United States]
STEL: 0.1 (ppm) from ACGIH (TLV) [United States]
TWA: 1 CEIL: 1 (mg/m³) from OSHA (PEL) [United States]
TWA: 0.1 CEIL: 0.1 (ppm) from OSHA (PEL) [United States]
STEL: 0.1 (ppm) [United Kingdom (UK)]
STEL: 1.1 (mg/m³) [United Kingdom (UK)]

Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical state and appearance	Liquid.	Odor	Not available.
Molecular Weight	Not applicable.	Taste	Not available.
pH (1% soln/water)	Not available	Color	Clear Brown. (Dark)

Boiling Point The lowest known value is 100°C (212°F) (Water).

Melting Point Not available.

Critical Temperature Not available.

Specific Gravity Weighted average: 1.04 (Water = 1)

Vapor Pressure The highest known value is 17.535 mm of Hg (@ 20°C) (Water).

Vapor Density The highest known value is 0.62 (Air = 1) (Water).

Volatility	Not available.
Odor Threshold	Not available.
Water/Oil Dist. Coeff.	Not available.
Ionicity (in Water)	Not available.
Dispersion Properties	See solubility in water, methanol, diethyl ether, acetone.
Solubility	Easily soluble in cold water, hot water. Soluble in methanol, diethyl ether. Partially soluble in acetone.

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Incompatible materials
Incompatibility with various substances	Reactive with acids Slightly reactive to reactive with combustible materials, organic materials, metals
Corrosivity	Not available
Special Remarks on Reactivity	Not available
Special Remarks on Corrosivity	Not available.
Polymerization	Not available.

Section 11. Toxicological Information

Routes of Entry	Skin contact. Eye contact.
Toxicity to Animals	Acute oral toxicity (LD50): 14000 mg/kg [Rat]. (Iodine).
Chronic Effects on Humans	The substance is toxic to lungs, the nervous system, mucous membranes
Other Toxic Effects on Humans	Hazardous in case of skin contact (irritant), of ingestion. Slightly hazardous in case of inhalation.
Special Remarks on Toxicity to Animals	Lowest Published Lethal Dose: LDL [Mouse] - Route: Oral; Dose: 1862 mg/kg LDL[Rabbit] - Route: Oral; Dose: 916 mg/kg (Potassium Iodide)
Special Remarks on Chronic Effects on Humans	May cause adverse reproductive effects and birth defects based on animal data. May affect genetic material based on animal data (Potassium Iodide)
Special Remarks on other Toxic Effects on Humans	Acute Potential Health Effects: Skin: Causes skin irritation. May cause brownish or yellowish staining of the skin. Eyes: Causes eye irritation. Inhalation: Inhalation of mist or vapors may cause respiratory tract irritation. Ingestion: Can cause gastrointestinal/digestive tract irritation with thirst, abdominal pain, nausea, vomiting, hypermotility, diarrhea, staining of the mouth, esophagus, lips, mucous membranes, metallic taste. This product contains Potassium Iodide which may affect behavior (somnolence, muscle weakness), respiration (dyspnea). Serum-sickness type of hypersensitivity such as fever, arthralgia, lymph node enlargement, and eosinophilia may appear. Thrombotic thrombocytopenic purpura, and fatal periarteritis nodosa attributed to hypersensitivity to iodide has been described. This product contains iodine which may affect the cardiovascular system (tachycardia, hypotension, cardiovascular collapse), behavior/central nervous system (delirium, dizziness, headache, hallucinations, seizures, depression, stupor, somnolence, muscle weakness). Death is rare following acute iodine ingestion. It is estimated that the mean lethal dose in an adult lies between 2 to 4 grams of free iodine. However, death from acute iodine poisoning may occur

due to circulatory collapse, asphyxiation from glottic edema, pulmonary edema, aspiration pneumonia, and cyanosis.

Chronic Potential Health Effects
The product contains Potassium Iodide which has the following chronic effects:
Chronic exposure can lead to iodism characterized by salivation, nasal discharge, sneezing, conjunctivitis, fever, headache, laryngitis, bronchitis, stomatitis, parotitis, anemia, and skin rashes. Chronic ingestion may also affect metabolism (anorexia), and thyroid gland (hypothyroidism, goiter). Furthermore, chronic ingestion of iodides (in animals) during pregnancy has resulted in fetal deaths, severe goiter and cretinoid appearance of the newborn.

This product contains Iodine which has the following chronic effects:
Skin: May cause reddening of the skin, itching, acne-like eruption of the skin/skin rash, and skin allergies and brownish or yellowish staining of the skin.
Eyes: May cause eye irritation and conjunctivitis.
Ingestion: May cause a reversible reduction in thyroid function (hypothyroidism), nodular goiter, hyperthyroidism, thyrotoxicosis, metabolic disturbances, and may affect the blood (anemia), liver, urinary system/kidneys (kidney damage, hematuria, albuminuria, anuria). Other symptoms of chronic iodine poisoning (Iodism) may include fever, rapid heartbeat, tremor, headache, delirium, stupor, insomnia, salivation, weight loss/loss of appetite, salivation, stomatitis, parotitis, diarrhea, gastric irritation, joint pain and swelling. Furthermore, chronic ingestion of iodides (in animals) during pregnancy has resulted in fetal deaths, severe goiter and cretinoid appearance of the newborn.
Inhalation: May cause disrupted thyroid activity (see ingestion), and chronic irritation of the throat, sneezing, nasal discharge, bronchitis, laryngitis, asthma. It may also affect behavior (see ingestion).
Iodine concentrates in the Thyroid during chronic exposure.


Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	Not available.
Special Remarks on the Products of Biodegradation	Not available.

Section 13. Disposal Considerations

Waste Disposal

Section 14. Transport Information

DOT Classification	Not a DOT controlled material (United States).
Identification	Not applicable.
Special Provisions for Transport	Not available.
DOT (Pictograms)	

Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations

Connecticut hazardous material survey.: Hydrochloric acid
 Illinois toxic substances disclosure to employee act: Iodine; Hydrochloric acid
 Illinois chemical safety act: Hydrochloric acid
 New York release reporting list: Hydrochloric acid
 Rhode Island RTK hazardous substances: Iodine; Hydrochloric acid
 Pennsylvania RTK: Iodine; Hydrochloric acid
 Minnesota: Iodine; Hydrochloric acid
 Massachusetts RTK: Iodine; Hydrochloric acid
 Massachusetts spill list: Iodine; Hydrochloric acid
 New Jersey: Iodine; Hydrochloric acid
 New Jersey spill list: Hydrochloric acid
 Louisiana RTK reporting list: Hydrochloric acid
 Louisiana spill reporting: Hydrochloric acid
 California Director's List of Hazardous Substances: Hydrochloric acid; Iodine
 TSCA 8(b) inventory: Iodine; Potassium Iodide; Hydrochloric acid; Water
 TSCA 4(a) proposed test rules: Hydrochloric acid
 SARA 302/304/311/312 extremely hazardous substances: Hydrochloric acid
 CERCLA: Hazardous substances: Hydrochloric acid: 5000 lbs. (2268 kg);

California Proposition 65 Warnings

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.
 California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

Other Regulations

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications


WHMIS (Canada) CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC) R36/38- Irritating to eyes and skin. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S37- Wear suitable gloves.

HMS (U.S.A.)

Health Hazard	2
Fire Hazard	0
Reactivity	0
Personal Protection	h

National Fire Protection Association (U.S.A.)

Health  Flammability
 Reactivity
 Specific hazard

WHMIS (Canada) (Pictograms)



DSCL (Europe) (Pictograms)



TDG (Canada) (Pictograms)



ADR (Europe) (Pictograms)



Protective Equipment



Gloves



Lab coat.



Wear appropriate respirator when ventilation
is inadequate.

Splash goggles.

Section 16. Other Information

MSDS Code SV095

References Not available.

Other Special Considerations Not available.

Validated by Sonia Owen on 7/22/2008.

Verified by Sonia Owen.

Printed 9/11/2008.

CALL (310) 516-8000

Notice to Reader

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.