RICCA CHEMICAL COMPANY®

Safety Data Sheet

Classified According to Canada Hazardous Product Regulations SOR/2015-17 (HPR 2022)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation Iodine Monochloride Solution, Wijs, for Iodine Absorption Number of Fats and Oils

Product Number 4110

Other Identifying Product Numbers 4110-1, 4110-100, 4110-16, 4110-1SC, 4110-32, 4110-5PT

1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

1.3. Details of the Supplier of the Safety Data Sheet

Company Ricca Chemical Company
Address 412 West Fork Drive

Arlington, TX 76012 USA

Telephone 888-467-4222

1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA)	800-424-9300
CHEMTREC (International)	1+ 703-527-3887

1.5. Distributor Address

Ricca Chemical Company
412 West Fork Drive
Arlington, TX 76012 USA

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SECTION 2: Hazard Identification

2.1. Classification of the Hazardous Product

Hazard Class	Category	Hazard Statements	Precautionary Statements
Acute Toxicity - Dermal	Category 4	H312	P280,P302+P352,P312,P321,P362+P364, P501
Acute Toxicity - Inhalation (Vapors)	Category 3	H331	P261,P271,P304+P340,P311, P321,P403+P233,P405,P501
Flammable Liquids	Category 3	H226	P210,P233,P240,P241,P242,P243, P280,P303+P361+P353,P370+P378, P403+P235,P501
Skin Corrosion / Irritation	Category 1	H314	P260,P264,P280,P301+P330+P331, P303+P361+P353,P363,P304+P340, P310,P321,P305+P351+P338,P405, P501
Serious Eye Damage / Eye Irritation	Category 1	H318	P280,P305+P351+P338,P310

2.2. GHS Label Elements

Pictograms:

Signal Word: **Danger**

Hazard Statements:

NOTE: Hazard statements may be combined on labels to improve clarity and readability.

Hazard Number	Hazard Statement
H226	Flammable liquid and vapor
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H331	Toxic if inhaled

Precautionary Statements:

NOTE: Precautionary statements may be combined or consolidated on labels to improve clarity and readability.

Prevention

Precautionary Number	Precautionary Statement
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharge.
P260	Do not breathe fumes or mist.
P264	Wash hands, arms, and face thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves and eye protection.

Response

Precautionary Number	Precautionary Statement
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a poison center or doctor.
P362+P364	Take off contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use dry chemical, foam, or carbon dioxide to extinguish.

Storage

Precautionary Number	Precautionary Statement
P403+P233+P235	Store in a well-ventilated place. Keep container tightly closed. Keep cool.
P405	Store locked up.

Disposal

Precautionary Number	Precautionary Statement
P501	Dispose of contents/container to suitable waste stream in accordance with local, state, federal, and international regulations.

2.3. Hazards not Otherwise Classified

No other hazards identified.

2.4. Ingredients of Unknown Acute Toxicity

1.5 percent of this mixture consists of ingredient(s) of unknown acute oral toxicity. 98.5 percent of this mixture consists of ingredient(s) of unknown acute dermal toxicity.

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SECTION 3: Composition / Information on Ingredients

3.1. Components of Mixture

Chemical Name (IUPAC)	Common Name and Synonyms	CAS Number	Weight%
acetic acid	Acetic Acid; Ethanoic acid	64-19-7	98.45
Iodine monochloride	Iodine Monochloride	7790-99-0	1.46
iodine	Iodine	7553-56-2	0.10

SECTION 4: First-Aid Measures

4.1. Description of Necessary First-Aid Measures

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Eye contact may cause severe eye damage followed by loss of sight. Vapor exposure may cause watering and irritation to eyes.

Ingestion: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Do not induce vomiting. Give large quantity of water. Call a physician immediately.

Inhalation: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Skin Contact: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. May cause serious damage to the skin. Effects may include redness, pain, skin burns.

4.2. Most Important Symptoms and Effects, Acute and Delayed

Toxic if inhaled DANGER! Corrosive and flammable. Causes severe burns. May be fatal if swallowed. Use with adequate ventilation. Avoid prolonged breathing of vapor or contact with skin. Do not pipet by mouth. If ingested, give large quantity of water. Do not induce vomiting. Call a physician. Wash areas of contact with plenty of water for at least 15 minutes. For eyes, get medical attention. EYE CONTACT: Eye contact may cause severe eye damage followed by loss of sight. Vapor exposure may cause watering and irritation to eyes. SKIN CONTACT: May cause serious damage to the skin. Effects may include redness, pain, skin burns. CHRONIC EFFECTS / CARCINOGENICITY: Repeated exposures may cause erosion of exposed front teeth, darkening of skin and chronic inflammation of the nose, throat and bronchial tubes.

4.3. Immediate Medical Attention or Special Treatment Needed

Immediately call a poison center or doctor. Irrigate immediately with large quantity of water for at least 15 minutes. Get medical attention immediately. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Flush with plenty of water for at least 15 minutes. Call a physician if irritation develops. Do not induce vomiting. Give large quantity of water. Call a physician immediately.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

In case of fire: Use dry chemical, foam, or carbon dioxide to extinguish. Water spray, dry chemical, alcohol foam, carbon dioxide

5.2. Specific Hazards Arising from the Substance or Mixture in a Fire

Flammable liquid and vapor Combustible liquid. Combustion may produce irritants and toxic gases.

5.3. Special Protective Equipment and Precautions for Firefighters

Wear special protective clothing and positive pressure self-contained breathing apparatus. Butyl rubber, Teflon, Viton, or Saranex barrier recommended.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Ground and bond container and receiving equipment. Use explosion-proof equipment. Use non-sparking tools. Take action to prevent static discharge. Wear protective gloves and eye protection.

6.2. Cleanup and Containment Methods and Materials

Use water spray to cool and disperse vapors, protect personnel, and dilute spills to form nonflammable mixtures. Use soda ash to neutralize spills. Control runoff and isolate discharged material for proper disposal.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Do not mix with bases. Store at 15oC (59oF) or above to prevent crystallization.

SECTION 8: Exposure Controls / Personal Protection

8.1. Exposure Limits

U.S. OSHA - Permissible Exposure Limits (PEL) - Time Weighted Averages (TWA)

Chemical Name	CAS Number	Exposure Limit
Acetic Acid	64-19-7	10 ppm TWA; 25 mg/m3 TWA

U.S. OSHA - Permissible Exposure Limits (PEL) - Ceiling Limits

Chemical Name	CAS Number	Exposure Limit
Iodine	7553-56-2	0.1 ppm Ceiling; 1 mg/m3 Ceiling

U.S. OSHA - Permissible Exposure Limits (PEL) - Short Term Exposure Limits (STEL)

No limits found.

U.S. OSHA - Specifically Regulated Chemicals

No limits found.

ACGIH - Threshold Limit Values - Ceilings (TLV-C)

No limits found.

ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)

Chemical Name	CAS Number	Exposure Limit
Acetic Acid	64-19-7	15 ppm STEL

ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

Chemical Name	CAS Number	Exposure Limit
Acetic Acid	64-19-7	10 ppm TWA
Iodine	7553-56-2	0.001 ppm TWA (inhalable fraction and vapor, as I)

8.2. Engineering Controls

Use only outdoors or in a well-ventilated area. A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limit.

8.3. Individual Protective Measures and Personal Protective Equipment

Respiratory Protection: Work with adequate ventilation or wear respirator with acid gas/organic vapor cartridge.

Skin Protection: Chemical resistant gloves.

Eye Protection: Safety glasses or goggles.

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SECTION 9: Physical and Chemical Properties

9.1. Physical and Chemical Properties

Physical State:	liquid
Color:	Dark brown
Odor:	strong, vinegar, lachrymator
Odor Threshold:	0.074 ppm
Melting/Freezing Point:	16.64°C
Boiling Point/Range:	Approximately 118°C
Flammability:	Data not available.
Flammability/Explosive Limits:	Data not available. - 19.9% (Acetic Acid)
Flash Point:	39.4 °C closed cup (ECHA_API)
Auto-Ignition Temperature:	Data not available.
Decomposition Temperature:	Data not available.
pH:	<1
Kinematic Viscosity:	Data not available.
Solubility:	miscible
Vapor Pressure:	11.4 mmHg at 20°C
Evaporation Rate:	0.97 (butyl acetate = 1)
Relative Density:	1.05
Relative Vapor Density:	2.1
Particle Characteristics:	Data not available.
Partition Coefficient n-octanol/water, log	-0.31 at 20 °C

SECTION 10: Stability and Reactivity

10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage. Acetic acid contracts slightly upon freezing which may cause the container to burst.

10.2. Possibility of Hazardous Reactions

Data not available.

10.3. Conditions to Avoid and Incompatible Materials

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Strong bases, strong oxidizers, chromic acid, sodium peroxide, nitric acid, perchloric acid.

10.4. Hazardous Decomposition Products

Will not occur.

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SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Oral acute toxicity estimate (ATE): 3585 mg/kg(calculated)

Chemical Name	CAS Number	Toxicity
Acetic Acid	64-19-7	Oral LD50 Rat 3530 mg/kg (Source: Canada_HSA)
Iodine	7553-56-2	Oral LD50 Rat 14 g/kg (Source: NLM_CIP)

Acute Toxicity - Dermal Exposure:

Dermal acute toxicity estimate (ATE): 1415 mg/kg(calculated)

Chemical Name	CAS Number	Toxicity
Iodine	7553-56-2	Dermal LD50 Rabbit 1425 mg/kg (males, Source: ECHA_API); Dermal LD50 Rabbit >2000 mg/kg (females, Source: ECHA_API)
Iodine Monochloride	7790-99-0	Dermal LD50 Rabbit 1425 mg/kg (males, as Iodine [7553-56-2], Source: ECHA_API); Dermal LD50 Rabbit >2000 mg/kg (females, as Iodine [7553-56-2], Source: ECHA_API)

Acute Toxicity - Inhalation Exposure:

Inhalation acute toxicity estimate (ATE, vapor): 8.6338 mg/L, 4 h(calculated); Inhalation acute toxicity estimate (ATE, dust or mist): 294.1026 mg/L,

Chemical Name	CAS Number	Toxicity
Acetic Acid	64-19-7	Inhalation LC50 Rat > 8.5 mg/L 4 h (Source: Canada_HSA)
Iodine	7553-56-2	Inhalation LC50 Rat >4.588 mg/L 4 h (death occurred (3 out of 10 tested animals), dust, Source: ECHA)
Iodine Monochloride	7790-99-0	Inhalation LC50 Rat >4.588 mg/L 4 h (as Iodine [7553-56-2], death occurred (3 out of 10 tested animals), dust, Source: ECHA)

11.2 Carcinogenicity:

International Agency for Research on Cancer (IARC)

Chemical Name	CAS Number	Classification
	No data found.	

National Toxicology Program (NTP)

Chemical Name	CAS Number	Classification
	No data found.	

U.S. OSHA specifically regulated carcinogens

Chemical Name	CAS Number	Classification
	No data found.	

11.3 Additional Toxicology Information:

Harmful in contact with skin. Causes severe skin burns and eye damage. Toxic if inhaled.

SECTION 12: Ecological Information

12.1. Ecotoxicity

Chemical Name	CAS Number	Species	Exposure	Toxicity
Acetic Acid	64-19-7	Freshwater Fish	Acute	LC50 96 h Pimephales promelas 79 mg/L [static] (EPA); LC50 96 h Lepomis macrochirus 75 mg/L [static] (EPA)
Iodine	7553-56-2	Freshwater Fish	Acute	LC50 96 h Oncorhynchus mykiss 1.67 mg/L [static] (ECHA)
Acetic Acid	64-19-7	Water Flea	Acute	EC50 48 h Daphnia magna 65 mg/L [Static] (EPA)

12.2. Persistence and Degradability

Data not available.

12.3. Bioaccumulative Potential

Data not available.

12.4. Mobility in soil

Data not available.

12.5. Other Adverse Ecological Effects

Data not available.

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Neutralize the Iodine Monochloride with Sodium Thiosulfate in large volume of water. Neutralize acid with Soda Ash or slaked lime mixture, and then pour into the drain while flushing with water, if allowed. If not allowed, save for recovery or recycling in an approved waste disposal facility. Always dispose of in accordance with local, state and federal regulations.

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SECTION 14: Transportation Information

14.1 Transportation by Land - Department of Transportation (DOT, United States of America)

Sizes: 1 L, 2.5 L, 4 L, 100 mL, 500 mL

UN Number: UN2920

Proper Shipping Name: Corrosive liquid, flammable, n.o.s. (Acetic Acid, Iodine Monochloride)

Hazard Class: 8 (3)

Packing Group: II

Hazard Label(s):

14.2 Transportation by Air - International Air Transport Association (IATA)

Sizes: 1 L, 2.5 L, 4 L, 100 mL, 500 mL

UN Number: UN2920

Proper Shipping Name: Corrosive liquid, flammable, n.o.s. (Acetic Acid, Iodine Monochloride)

Hazard Class: 8 (3)

Packing Group: II

Hazard Label(s):

14.3 Transportation of Dangerous Goods (TDG, Canada)

Sizes: 1 L, 2.5 L, 4 L, 100 mL, 500 mL

UN Number: UN2920

Proper Shipping Name: CORROSIVE LIQUID, FLAMMABLE, N.O.S. (acetic acid, iodine monochloride)

Hazard Class: 8 (3)

Packing Group: II

Hazard Label(s):

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SECTION 15: Regulatory Information

15.01. Occupational Safety and Health Administration (OSHA) Hazards

Chemical Name	CAS Number	Regulatory Information
		No data found.

15.02. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Chemical Name	CAS Number	RQ
		No data found.

15.03. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Chemical Name	CAS Number	Regulatory Information
Acetic Acid	64-19-7	5000 lb final RQ; 2270 kg final RQ

15.04. Superfund Amendments and Reauthorization Act (SARA) 313 Toxics Release Inventory (TRI)

Chemical Name	CAS Number	List
		No data found.

15.05. Massachusetts Right-to-Know Substance List

Chemical Name	CAS Number	Regulatory Information
Acetic Acid	64-19-7	Present (including glacial)
Iodine	7553-56-2	Present

15.06. Pennsylvania Right-to-Know Hazardous Substances

Chemical Name	CAS Number	Regulatory Information
Acetic Acid	64-19-7	Environmental hazard; Environmental hazard (water solutions)
Iodine	7553-56-2	Present

15.07. New Jersey Worker and Community Right-to-Know Components

Chemical Name	CAS Number	Regulatory Information
Acetic Acid	64-19-7	sn 0004
Iodine	7553-56-2	sn 1026
Iodine Monochloride	7790-99-0	sn 1027

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15.08. California Proposition 65

Chemical Name	CAS Number	Regulatory Information
		No data found.

15.09. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Chemical Name	CAS Number	List	Status
Acetic Acid	64-19-7	DSL	Present
Acetic Acid	64-19-7	NDSL	"Present" As Carboxylic acids, C1-5 [68937-68-8]
Iodine	7553-56-2	DSL	Present
Iodine Monochloride	7790-99-0	DSL	Present

15.10. United States of America Toxic Substances Control Act (TSCA) List

Chemical Name	CAS Number	Status
Acetic Acid	64-19-7	Present (ACTIVE)
Iodine	7553-56-2	Present (ACTIVE)
Iodine Monochloride	7790-99-0	Present (ACTIVE)

15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Chemical Name	CAS Number	List	Number
Acetic Acid	64-19-7	EINECS	200-580-7
Iodine	7553-56-2	EINECS	231-442-4
Iodine Monochloride	7790-99-0	EINECS	232-236-7

15.12. China - Inventory of Existing chemical Substances (IECSC)

Chemical Name	CAS Number	Status
Acetic Acid	64-19-7	Present [39068]
Iodine	7553-56-2	Present [05736]
Iodine Monochloride	7790-99-0	Present [37993]

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15.13. Korea - Existing Chemicals Inventory (KECI/KECL)

Chemical Name	CAS Number	List	Status
Acetic Acid	64-19-7	Annex 1	Present [KE-00013]
Iodine	7553-56-2	Annex 1	Present [KE-21023]
Iodine Monochloride	7790-99-0	Annex 1	Present [KE-21028]

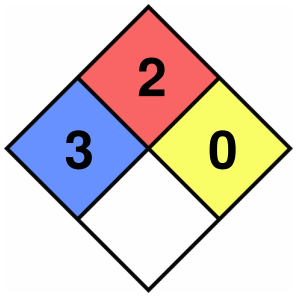
15.14. Japan - Existing and New Chemical Substances Inventory (ENCS)

Chemical Name	CAS Number	MITI No.
Acetic Acid	64-19-7	(2)-688
Iodine	7553-56-2	- (exempt)
Iodine Monochloride	7790-99-0	(1)-642

SECTION 16: Other Information

16.1 National Fire Protection Associate (NFPA) Rating

Health: 3
Flammability: 2
Reactivity 0
Special Hazard:



16.2 Document Revision

Last Revision Date:
2026-05-05

DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.