RICCA CHEMICAL COMPANY®

Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: Starch Indicator, with 5% Potassium Iodide

Product Number: 8051

Other Identifying Product Numbers: 8051-16

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: 448 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

SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

For the full text of the Hazard and Precautionary Statements listed below, see Section 16.

Hazard Class	Category	Hazard Statements	Precautionary Statements:
Specific Target Organs/Systemic Toxicity Following Repeated Exposure	Category 1	H372	P260, P264, P270, P314, P501

2.2. GHS Label Elements

Pictograms:

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Signal Word: **Danger**

Hazard Statements:

Hazard Number	Hazard Statement
H372	Causes damage to organs through prolonged or repeated exposure.

Precautionary Statements:

Precautionary Number	Precautionary Statement
P260	Do not breathe fumes, mist, vapors, or spray.
P264	Wash arms, hands and face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P314	Get medical attention if you feel unwell.
P501	Dispose of contents in accordance with local, state, federal and international regulations.

2.4. Hazards not Otherwise Classified or Covered by GHS

Data not available.

SECTION 3: Composition / Information on Ingredients

3.1. Components of Substance or Mixture

Chemical Name	Formula	Molecular Weight	CAS Number	Weight%
Water	H_2O	18.01 g/mol	7732-18-5	94.20
Potassium Iodide	KI	166.00 g/mol	7681-11-0	5.24
Starch, soluble	$(C_6H_{10}O_5)_n$	Data not available.	9005-84-9	0.52
Zinc Chloride	$ZnCl_2$	136.31 g/mol	7646-85-7	< 0.1
Sodium Thiosulfate Pentahydrate	$Na_2S_2O_3 \cdot 5H_2O$	248.18 g/mol	10102-17-7	< 0.1
Proprietary	Proprietary	Data not available.	Proprietary	< 0.1
Sodium Carbonate	Na_2CO_3	105.98 g/mol	497-19-8	< 0.1

SECTION 4: First-Aid Measures

4.1. General First Aid Information

Eye Contact: May cause irritation, redness, pain, and tearing.

Inhalation: Not expected to require first aid. If necessary, remove to fresh air.

Skin Contact: May cause slight irritation.

Ingestion: Dilute with water or milk. Call a physician if necessary.

4.2. Most Important Symptoms and Effects, Acute and Delayed

Causes damage to organs through prolonged or repeated exposure. Wash areas of contact with water. Non-flammable, non-toxic, non-corrosive. Does not present any significant health hazards. EYE CONTACT: May cause irritation, redness, pain, and tearing. SKIN CONTACT: May cause slight irritation.

4.3. Medical Attention or Special Treatment Needed

Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. 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. Dilute with water or milk. Call a physician if necessary.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

Use any means suitable for extinguishing surrounding fire.

5.2. Specific Hazards Arising from the Substance or Mixture

Not considered to be a fire or explosion hazard.

5.3. Special Protective Equipment for Firefighters

Use protective clothing and breathing equipment appropriate for the surrounding fire.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear appropriate PPE for the size and nature of the spill. As a general rule, wear safety glasses and gloves.

6.2. Cleanup and Containment Methods and Materials

Absorb with inert material (vermiculite, sand). Ventilate, if necessary, site of spillage well to evaporate remaining liquid and dispel vapor. Do not flush to sewer. Always comply with local, state, and federal regulations.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage.

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SECTION 8: Exposure Controls / Personal Protection

8.1 Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Zinc Chloride (7646-85-7)	TLV-STEL	USA	2 mg/m³ STEL (fume)	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Zinc Chloride (7646-85-7)	TLV-TWA	USA	1 mg/m³ TWA (fume)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Zinc Chloride (7646-85-7)	TWA	USA	1 mg/m³ TWA (fume)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Potassium Iodide (7681-11-0)	TLV-TWA	USA	"0.01 mg/m³ TWA (inhalable particulate matter, as I)" As Iodides [RR-42509-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Potassium Iodide (7681-11-0)	TLV-TWA	USA	0.01 mg/m³ TWA (inhalable particulate matter, as I)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

8.2. Exposure Controls

Engineering Controls: No specific controls are needed. Normal room ventilation is adequate.

Respiratory Protection: Normal room ventilation is adequate.

Skin Protection: Chemical resistant gloves.

Eye Protection: Safety glasses or goggles.

8.3. Personal Protective Equipment

Normal room ventilation is adequate. Chemical resistant gloves. Safety glasses or goggles.

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SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Appearance: White translucent liquid
Physical State: Liquid
Odor: Data not available.
Odor Threshold: Data not available.
pH: Data not available.
Melting/Freezing Point: Approximately 0°C
Initial Boiling Point/Range: Approximately 100°C - Approximately 100°C
Flash Point: Data not available.
Evaporation Rate: Data not available.
Flammability: Data not available.
Flammability/Explosive Limits: Data not available.
Vapor Pressure: Data not available.
Vapor Density: Data not available.
Relative Density: 1.05
Solubility: Miscible
Partition Coefficient: Data not available.
Auto-Ignition Temperature: Data not available.
Decomposition Temperature: Data not available.
Viscosity: Data not available.
Explosive Properties: Data not available.
Oxidizing Properties: Data not available.

SECTION 10: Stability and Reactivity

10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

10.2. Possibility of Hazardous Reactions

Data not available.

10.3. Conditions to Avoid and Incompatible Materials

Strong oxidizing agents.

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:

Not applicable.

Acute Toxicity - Dermal Exposure:

Not applicable.

Acute Toxicity - Inhalation Exposure:

Not applicable.

Acute Toxicity - Other Information:

Potassium Iodide has been investigated as a mutagen and reproductive effector. No LD50 information found on Starch and Sodium Thiosulfate. LD50, oral, rat (Zinc Chloride): 350 mg/kg, details of toxic effects not reported other than lethal dose value.

Skin Corrosion and Irritation:

Not applicable.

Serious Eye Damage and Irritation:

Not applicable.

Respiratory Sensitization:

Not applicable.

Skin Sensitization:

Not applicable.

Germ Cell Mutagenicity:

Not applicable.

Carcinogenicity:

Not applicable.

Reproductive Toxicity:

Not applicable.

Specific Target Organ Toxicity from Single Exposure:

Not applicable.

Specific Target Organ Toxicity from Repeated Exposure:

Causes damage to organs through prolonged or repeated exposure. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Get medical attention if you feel unwell. Dispose of contents in accordance with local, state, federal and international regulations.

Aspiration Hazard:

Not applicable.

Additional Toxicology Information:

Data not available.

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SECTION 12: Ecological Information

12.1. Ecotoxicity

Not applicable.

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

Data not available.

SECTION 14: Transportation Information

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

Not regulated according to DOT Regulations.

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

Not regulated according to IATA Dangerous Goods Regulations.

14.3 Transportation of Dangerous Goods (TDG, Canada)

Not regulated according to TDG Regulations.

SECTION 15: Regulatory Information

15.1. Occupational Safety and Health Administration (OSHA) Hazards

Not listed.

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

Not listed.

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

Zinc Chloride (CAS # 7646-85-7): 1000 lb final RQ; 454 kg final RQ

15.4. Superfund Amendments and Reauthorization Act (SARA) 313 Toxic Release Inventory (TRI)

Zinc Chloride (CAS # 7646-85-7): "1.0 % de minimis concentration (includes any unique chemical substance that contains Zinc as part of that chemical's infrastructure, listed under Chemical Category N982)" As Zinc compounds [RR-00578-7]
Zinc Chloride (CAS # 7646-85-7): 1.0 % de minimis concentration (includes any unique chemical substance that contains Zinc as part of that chemical's infrastructure, listed under Chemical Category N982)

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15.5. Massachusetts Right-to-Know Substance List

Zinc Chloride (CAS # 7646-85-7): Present (fume)

15.6. Pennsylvania Right-to-Know Hazardous Substances

Zinc Chloride (CAS # 7646-85-7): "Environmental hazard" As Zinc compounds [RR-00578-7]
Zinc Chloride (CAS # 7646-85-7): "Present" As Zinc compounds [RR-00578-7]
Zinc Chloride (CAS # 7646-85-7): Environmental hazard
Zinc Chloride (CAS # 7646-85-7): Environmental hazard (including fume)
Zinc Chloride (CAS # 7646-85-7): Present
Zinc Chloride (CAS # 7646-85-7): Present (including fume)
Water (CAS # 7732-18-5): "Present" As Ethyl alcohol and water [RR-00802-6]
Water (CAS # 7732-18-5): Present

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

Zinc Chloride (CAS # 7646-85-7): "SN 3012 500 lb TPQ (Category Code N982. Includes any unique chemical substance that contains the named metal as part of that chemical structure)" As Zinc compounds [RR-00578-7]
Zinc Chloride (CAS # 7646-85-7): "sn 3012" As Zinc compounds [RR-00578-7]
Zinc Chloride (CAS # 7646-85-7): corrosive
Zinc Chloride (CAS # 7646-85-7): sn 2030
Zinc Chloride (CAS # 7646-85-7): sn 3012
Zinc Chloride (CAS # 7646-85-7): SN 3012 500 lb TPQ (Category Code N982. Includes any unique chemical substance that contains the named metal as part of that chemical structure)

15.8. California Proposition 65

Not listed.

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

Sodium Thiosulfate Pentahydrate (CAS # 10102-17-7): Present (DSL)
Sodium Carbonate (CAS # 497-19-8): Present (DSL)
Zinc Chloride (CAS # 7646-85-7): Present (DSL)
Potassium Iodide (CAS # 7681-11-0): Present (DSL)
Water (CAS # 7732-18-5): Present (DSL)
Starch, soluble (CAS # 9005-84-9): Present (DSL)

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

All components of this solution are listed as active on the TSCA Inventory or are mixtures (hydrates) of active items listed on the TSCA Inventory.

Sodium Thiosulfate Pentahydrate (CAS # 10102-17-7): Present (ACTIVE)
Sodium Carbonate (CAS # 497-19-8): Present (ACTIVE)
Zinc Chloride (CAS # 7646-85-7): Present (ACTIVE)
Potassium Iodide (CAS # 7681-11-0): Present (ACTIVE)
Water (CAS # 7732-18-5): Present (ACTIVE)
Starch, soluble (CAS # 9005-84-9): Present [XU] (ACTIVE)

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

Sodium Thiosulfate Pentahydrate (CAS # 10102-17-7): 231-867-5
Sodium Carbonate (CAS # 497-19-8): 207-838-8
Sodium Carbonate (CAS # 497-19-8): 231-420-4
Zinc Chloride (CAS # 7646-85-7): 231-592-0
Potassium Iodide (CAS # 7681-11-0): 231-659-4
Water (CAS # 7732-18-5): 231-791-2
Starch, soluble (CAS # 9005-84-9): 232-686-4

SECTION 16: Other Information

16.1. Full Text of Hazard Statements and Precautionary Statements

Causes damage to organs through prolonged or repeated exposure.

Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product.

Get medical attention if you feel unwell.

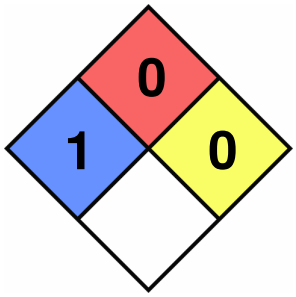
Dispose of contents in accordance with local, state, federal and international regulations.

16.2. Miscellaneous Hazard Classes

Canadian Carcinogenicity Hazard Class: Not Applicable.
Physical Hazards Not Otherwise Classified (PHNOC): Not Applicable.
Health Hazards Not Otherwise Classified (HHNOC): Not Applicable.
Biohazardous Infectious Materials Hazard Class: Not Applicable.

16.3. National Fire Protection Association (NFPA) Rating

Health: 1
Flammability: 0
Reactivity: 0
Special Hazard:



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16.4. Document Revision

Last Revision Date: 2023-09-11

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.