



Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation Arsenic Trioxide, ACS Reductometric Standard

Product Number RDCA0700

Other Identifying Product Numbers RDCA0700-100B1

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

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SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

Hazard Class	Category	Hazard Statements	Precautionary Statements
Acute Toxicity - Oral	Category 2	H300	P264,P270,P301+P310,P321,P330,P405,P501
Acute Toxicity - Inhalation (Dusts and Mists)	Category 2	H330	P260,P271,P284,P304+P340,P310,P320,P403+P233,P405,P501
Skin Corrosion / Irritation	Category 1B	H314	P260,P264,P280,P301+P330+P331,P303+P361+P353,P363,P304+P340,P310,P321,P305+P351+P338,P405, P501
Carcinogenicity	Category 1A	H350	P201,P202,P280,P308+P313,P405, P501
Hazardous to the Aquatic Environment, Short-term (Acute)	Acute 1	H400	P273,P391,P501
Hazardous to the Aquatic Environment, Long-term (Chronic)	Chronic 1	H410	P273,P391,P501

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
H300+H330	Fatal if swallowed or if inhaled
H314	Causes severe skin burns and eye damage
H350	May cause cancer
H410	Very toxic to aquatic life with long lasting effects

Precautionary Statements:

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

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Prevention

Precautionary Number	Precautionary Statement
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust.
P264	Wash hands, arms, and face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves and eye protection.
P284	In case of inadequate ventilation wear respiratory protection.

Response

Precautionary Number	Precautionary Statement
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor.
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.
P308+P313	If exposed or concerned: Get medical advice or attention.
P310	Immediately call a poison center or doctor.
P330	Rinse mouth.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.

Storage

Precautionary Number	Precautionary Statement
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
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

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SECTION 3: Composition / Information on Ingredients

3.1. Components of Substance

Chemical Name (IUPAC)	Common Name and Synonyms	CAS Number	Weight%
arsenic (III) oxide	Arsenic Trioxide; Diarsenic trioxide; White arsenic	1327-53-3	100.00

SECTION 4: First-Aid Measures

4.1. Description of Necessary Measures

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. May cause irritation, redness, pain, and tearing.

Ingestion: IF SWALLOWED: Immediately call a POISON CENTER or doctor. Dilute with water or milk. Vomiting may occur spontaneously but do not induce. 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 irritation, redness, and pain.

4.2. Most Important Symptoms and Effects, Acute and Delayed

May cause cancer DANGER! May be fatal if swallowed or inhaled. Contains inorganic Arsenic which can cause cancer. Causes irritation to eyes, skin and respiratory tract. May cause liver and kidney damage. EYE CONTACT: May cause irritation, redness, pain, and tearing. SKIN CONTACT: May cause irritation, redness, and pain. CHRONIC EFFECTS / CARCINOGENICITY: Arsenic on repeated or prolonged skin contact may cause bronzing of the skin, edema, dermatitis, and lesions. Repeated or prolonged inhalation of dust may cause damage to the nasal septum. Chronic exposure from inhalation or ingestion may cause hair and weight loss, a garlic odor to the breath and perspiration, excessive salivation and perspiration, central nervous system damage, hepatitis, gastrointestinal disturbances, cardiovascular damage, and kidney and liver damage. Arsenic compounds are known human carcinogens and may be teratogenic based on effects in laboratory animals.

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. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Immediately flush with plenty of water for at least 15 minutes. Remove any contaminated clothing. Wash with soap and water, then flush again with water. Call a physician if irritation develops. Induce vomiting immediately as directed by medical personnel. Call a physician immediately.

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 in a Fire

Not combustible, but if involved in a fire decomposes to produce arsenic fumes.

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5.3. Special Protective Equipment and Precautions for Firefighters

Wear special protective clothing and positive pressure self-contained breathing apparatus.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear protective gloves and eye protection.

6.2. Cleanup and Containment Methods and Materials

Prompt cleanup and removal are necessary. Shovel into suitable dry container.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

Store in a well-ventilated place. Keep container tightly closed. Store locked up. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Empty containers may be hazardous since they retain product residues. Store at room temperature.

SECTION 8: Exposure Controls / Personal Protection

8.1. Exposure Limits

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

Chemical Name	CAS Number	Exposure Limit
Arsenic Trioxide	1327-53-3	"10 µg/m ³ TWA (as As)" As Arsenic, inorganic compounds [RR-00065-7]

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

No limits found.

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

No limits found.

U.S. OSHA - Specifically Regulated Chemicals

Chemical Name	CAS Number	Exposure Limit
Arsenic Trioxide	1327-53-3	"10 µg/m ³ TWA (See 29 CFR 1910.1018; except Arsine, as As); 5 µg/m ³ Action Level (as As)" As Inorganic arsenic compounds [RR-00065-7]

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

No limits found.

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

No limits found.

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

Chemical Name	CAS Number	Exposure Limit
Arsenic Trioxide	1327-53-3	"0.01 mg/m ³ TWA (as As)" As Arsenic inorganic compounds [RR-00065-7]

8.2. Engineering Controls

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: A system of local or general exhaust is recommended. If necessary, wear a dust mask respirator to minimize exposure to dust particles.

Skin Protection: Chemical resistant gloves.

Eye Protection: Safety glasses or goggles.

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SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Physical State:	solid
Color:	Colorless/white
Odor:	odorless
Odor Threshold:	Data not available.
Melting/Freezing Point:	193°C (with sublimation)
Boiling Point/Range:	Approximately 465°C
Flammability:	Data not available.
Flammability/Explosive Limits:	Data not available.
Flash Point:	Data not available.
Auto-Ignition Temperature:	Data not available.
Decomposition Temperature:	Data not available.
pH:	N/A
Kinematic Viscosity:	Data not available.
Solubility:	17 g/L at 15°C
Vapor Pressure:	66.1 mmHg at 312°C
Evaporation Rate:	Data not available.
Relative Density:	3.74
Relative Vapor Density:	Data not available.
Particle Characteristics:	Data not available.
Partition Coefficient n-octanol/water, log	18.1 at 20 °C

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

Oxidizers, tannic acid, infusion cinchona and other vegetable astringent infusions and decoctions, iron solutions, rubidium carbide, chlorine trifluoride, fluorine, hydrogen fluoride, oxygen difluoride, acids, bases, sodium chlorate, zinc filings, other reactive metals and mercury. Corrosive to metals in the presence of moisture.

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): 5.0 mg/kg(calculated)

Chemical Name	CAS Number	Toxicity
Arsenic Trioxide	1327-53-3	Oral LD50 Acute Toxicity Estimate 5 mg/kg (Source: ECHA)

Acute Toxicity - Dermal Exposure:

No information found.

Acute Toxicity - Inhalation Exposure:

Inhalation acute toxicity estimate (ATE, dust or mist): 0.5000 mg/L, 4 h(calculated)

Chemical Name	CAS Number	Toxicity
Arsenic Trioxide	1327-53-3	Inhalation LC50 Acute Toxicity Estimate 0.5 mg/L 4 h (Source: ECHA)

11.2 Carcinogenicity:

International Agency for Research on Cancer (IARC)

Chemical Name	CAS Number	Classification
Arsenic Trioxide	1327-53-3	Group 1 (Carcinogenic to Humans) - Supplement 7 [1987] (listed under Arsenic and arsenic compounds)

National Toxicology Program (NTP)

Chemical Name	CAS Number	Classification
Arsenic Trioxide	1327-53-3	"Known Human Carcinogen" As Arsenic, inorganic compounds [RR-00065-7]

U.S. OSHA specifically regulated carcinogens

Chemical Name	CAS Number	Classification
Arsenic Trioxide	1327-53-3	"see 29 CFR 1910.1018 (except Arsine)" As Inorganic arsenic compounds [RR-00065-7]

11.3 Additional Toxicology Information:

Fatal if swallowed or if inhaled. Causes severe skin burns and eye damage. May cause cancer.

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SECTION 12: Ecological Information

12.1. Ecotoxicity

Chemical Name	CAS Number	Species	Exposure	Toxicity
Arsenic Trioxide	1327-53-3	Freshwater Fish	Acute	LC50 96 h Pimephales promelas 135 mg/L (IUCLID); LC50 96 h Oncorhynchus mykiss 18.8 - 21.4 mg/L [flow-through] (EPA); LC50 96 h Oncorhynchus mykiss >1000 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

Data not available.

SECTION 14: Transportation Information

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

Sizes: 100 g

UN Number: UN1561

Proper Shipping Name: Arsenic Trioxide

Hazard Class: 6.1

Packing Group: II

Hazard Label(s):



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

Sizes: 100 g

UN Number: UN1561

Proper Shipping Name: Arsenic Trioxide

Hazard Class: 6.1

Packing Group: II

Hazard Label(s):



14.3 Transportation of Dangerous Goods (TDG, Canada)

Sizes: 100 g

UN Number: UN1561

Proper Shipping Name: ARSENIC TRIOXIDE

Hazard Class: 6.1

Packing Group: II

Hazard Label(s):



SECTION 15: Regulatory Information

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15.01. Occupational Safety and Health Administration (OSHA) Hazards

Chemical Name	CAS Number	Regulatory Information
Arsenic Trioxide	1327-53-3	"10 µg/m3 TWA (See 29 CFR 1910.1018, except Arsine, as As); 5 µg/m3 Action Level (See 29 CFR 1910.1018, except Arsine, as As)" As Inorganic arsenic compounds [RR-00065-7]

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

Chemical Name	CAS Number	RQ	TPQ
Arsenic Trioxide	1327-53-3	100 lb lower TPQ; 10000 lb upper TPQ	1 lb EPCRA RQ

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

Chemical Name	CAS Number	Regulatory Information
Arsenic Trioxide	1327-53-3	1 lb final RQ; 0.454 kg final RQ

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

Chemical Name	CAS Number	List	Regulatory Information
Arsenic Trioxide	1327-53-3	Emission Reporting	"0.1 % de minimis concentration (includes any unique chemical substance that contains Arsenic as part of that chemical's infrastructure, listed under Chemical Category N020)" As Arsenic, inorganic compounds [RR-00065-7]

15.05. Massachusetts Right-to-Know Substance List

Chemical Name	CAS Number	Regulatory Information
Arsenic Trioxide	1327-53-3	Extraordinarily hazardous

15.06. Pennsylvania Right-to-Know Hazardous Substances

Chemical Name	CAS Number	Regulatory Information
Arsenic Trioxide	1327-53-3	Environmental hazard; Special hazardous substance

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

Chemical Name	CAS Number	Regulatory Information
Arsenic Trioxide	1327-53-3	sn 0161

15.08. California Proposition 65

Chemical Name	CAS Number	Regulatory Information
Arsenic Trioxide	1327-53-3	"carcinogen, 2/27/1987" As Arsenic, inorganic compounds [RR-00065-7]
Arsenic Trioxide	1327-53-3	"developmental toxicity, 5/1/1997" As Arsenic inorganic oxides [RR-03689-5]
Arsenic Trioxide	1327-53-3	"0.06 µg/day NSRL (inhalation, listed under Arsenic); 10 µg/day NSRL (except inhalation, listed under Arsenic)" As Arsenic, inorganic compounds [RR-00065-7]

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

Chemical Name	CAS Number	List	Status
Arsenic Trioxide	1327-53-3	DSL	Present

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

Chemical Name	CAS Number	Status
Arsenic Trioxide	1327-53-3	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
Arsenic Trioxide	1327-53-3	EINECS	215-481-4

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

Chemical Name	CAS Number	Status
Arsenic Trioxide	1327-53-3	Present [29706]

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

Chemical Name	CAS Number	List	Status
Arsenic Trioxide	1327-53-3	Annex 1	Present [KE-09858]
Arsenic Trioxide	1327-53-3	Annex 3	"Present (97-1-119)" As Arsenic compounds [RR-00625-7]

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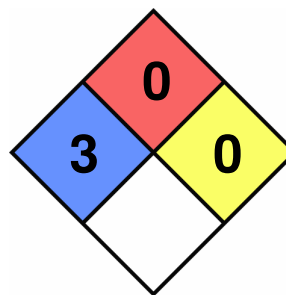
15.14. Japan - Existing and New Chemical Substances Inventory (ENCS)

Chemical Name	CAS Number	MITI No.
Arsenic Trioxide	1327-53-3	(1)-35, (9)-2400

SECTION 16: Other Information

16.1 National Fire Protection Associate (NFPA) Rating

Health: 3
Flammability: 0
Reactivity: 0
Special Hazard:



16.2 Document Revision

Last Revision Date:
 2026-05-25

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.