

Material Safety Data Sheet

Arsenic(V) oxide

ACC# 02088

Section 1 - Chemical Product and Company Identification

MSDS Name: Arsenic(V) oxide

Catalog Numbers: AC192500000, AC192500250, AC366310000, AC366310050, AC366310250

Synonyms: Arsenic pentoxide; Diarsenic pentaoxide; Arsenic acid anhydride; Arsenic anhydride.

Company Identification:

Acros Organics N.V.
One Reagent Lane
Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01

For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
1303-28-2	Arsenic(V) oxide	>99.9	215-116-9

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: white solid.

Danger! May be fatal if swallowed. Contains inorganic arsenic. Harmful if inhaled. Causes eye, skin, and respiratory tract irritation. Cancer hazard. May cause nervous system effects. May cause fetal effects.

Target Organs: Liver, lungs, nervous system, skin.

Potential Health Effects

Eye: May cause eye irritation. May result in corneal injury.

Skin: May cause skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.

Ingestion: May cause liver damage. Can cause nervous system damage. Ingestion of arsenical compounds may cause burning of the lips, throat constriction, swallowing difficulties, severe abdominal pain, severe nausea, projectile vomiting, and profuse diarrhea. All soluble arsenic (As) compounds are considered to be poisonous to humans. Inorganic arsenic is more toxic than organic arsenic. Organic arsenic is excreted more rapidly than inorganic arsenic. Arsenic 5+ is excreted more rapidly than arsenic 3+. Arsenic inhibits enzymes required for cellular respiration and also competes with phosphorus for incorporation into ATP, depleting cellular energy stores and leading to cell death.

Inhalation: Causes respiratory tract irritation. May cause effects similar to those described for ingestion. Inhalation of arsenic compounds may lead to irritation of the respiratory tract and to possible nasal perforation.

Chronic: Chronic ingestion is characterized by weakness, anorexia, gastrointestinal disturbances, impairment of cognitive function, peripheral neuropathy, and skin disorders. Chronic ingestion may cause fetal effects. Inorganic arsenic compounds may cause skin and lung cancers in humans.

Based on a case report of one family with chronic exposure, the spectrum of toxic effects from arsenic pentoxide may include skin rashes, nosebleeds, easy bruising, hair loss, headaches, malaise, and grand mal seizures. Because of mixed exposures, these effects cannot be attributed solely to arsenic

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

Ingestion: Call a poison control center. If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

Extinguishing Media: Use water spray to cool fire-exposed containers.

Flash Point: Not available.

Autoignition Temperature: Not available.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 3; Flammability: 0; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Use only with adequate ventilation or respiratory protection.

Storage: Poison room locked.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. See 29CFR 1910.1018 for regulatory requirements pertaining to all occupational exposures to inorganic arsenic.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Arsenic(V) oxide	0.01 mg/m3 TWA (as As) (listed under Arsenic, inorganic compounds).	5 mg/m3 IDLH (as As) (listed under Arsenic, inorganic compounds).	10 æg/m3 TWA (as As) (listed under Arsenic, inorganic compounds).5 æg/m3 Action Level (as As); 10 æg/m3 TWA (as As, Cancer hazard - see 29 CFR 19 10.1018, except Arsine) (listed under Arsenic, inorga nic compounds).

OSHA Vacated PELs: Arsenic(V) oxide: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Appearance: white

Odor: odorless

pH: acidic in soln

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate:Not available.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point:315 deg C (dec)

Decomposition Temperature:315 deg C

Solubility: Soluble.

Specific Gravity/Density:Not available.

Molecular Formula:As2O5

Molecular Weight:229.84

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Excess heat, moist air.

Incompatibilities with Other Materials: Acids, aluminum, halogens, zinc, rubidium carbide.

Hazardous Decomposition Products: Oxides of arsenic.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 1303-28-2: CG2275000

LD50/LC50:

CAS# 1303-28-2:

Oral, mouse: LD50 = 55 mg/kg;

Oral, rat: LD50 = 8 mg/kg;

Carcinogenicity:

CAS# 1303-28-2:

- **ACGIH:** A1 - Confirmed Human Carcinogen (listed as 'Arsenic, inorganic compounds').
- **California:** carcinogen, initial date 2/27/87 (listed as Arsenic, inorganic compounds).
- **NTP:** Known carcinogen (listed as Arsenic, inorganic compounds).
- **IARC:** Group 1 carcinogen

Epidemiology: No data available.

Teratogenicity: No data available.

Reproductive Effects: No data available.

Mutagenicity: No data available.

Neurotoxicity: No data available.

Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. No information available.

Environmental: No information available.

Physical: No information available.

Other: Used in wood preservatives, weed control, and as fungicide.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: CAS# 1303-28-2: waste number P011.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	DOT regulated - small quantity provisions apply (see 49CFR173.4)	ARSENIC PENTOXIDE
Hazard Class:		6.1
UN Number:		UN1559
Packing Group:		II

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 1303-28-2 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

CAS# 1303-28-2: 1 lb final RQ; 0.454 kg final RQ

SARA Section 302 Extremely Hazardous Substances

CAS# 1303-28-2: 100 lb lower threshold TPQ; 10000 lb upper threshold T PQ

Section 313

This material contains Arsenic(V) oxide (listed as Arsenic, inorganic compounds), >99.9%, (CAS# 1303-28-2) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

CAS# 1303-28-2 (listed as Arsenic, inorganic compounds) is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

CAS# 1303-28-2 is listed as a Hazardous Substance under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA. CAS# 1303-28-2 is listed as a Toxic Pollutant under the Clean Water Act.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 1303-28-2 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, (listed as Arsenic, inorganic compounds), Massachusetts.

California Prop 65

The following statement(s) is(are) made in order to comply with the California Safe Drinking Water Act:

WARNING: This product contains Arsenic(V) oxide, listed as 'Arsenic, inorganic compounds', a chemical known to the state of California to cause cancer. WARNING: This product contains Arsenic (V) oxide, listed as 'Arsenic (inorganic oxides)', a chemical known to the state of California to cause developmental reproductive toxicity.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

T N

Risk Phrases:

R 23/25 Toxic by inhalation and if swallowed.

R 45 May cause cancer.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 53 Avoid exposure - obtain special instructions before use.

S 60 This material and its container must be disposed of as hazardous waste.

S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.

WGK (Water Danger/Protection)

CAS# 1303-28-2: 3

Canada - DSL/NDSL

CAS# 1303-28-2 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of D2A, D1A.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 1303-28-2 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 9/02/1997

Revision #5 Date: 11/20/2008

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.