

Material Safety Data Sheet

Beryllium oxide, 99.99%

ACC# 11687

Section 1 - Chemical Product and Company Identification

MSDS Name: Beryllium oxide, 99.99%

Catalog Numbers: AC192570000, AC192570250

Synonyms: Beryllium monoxide.

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
1304-56-9	Beryllium oxide	99.99	215-133-1

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: white pellets.

Danger! May be fatal if inhaled. Causes eye, skin, and respiratory tract irritation. Harmful if swallowed. May cause allergic skin reaction. May cause cancer in humans.

Target Organs: Lungs, skin.

Potential Health Effects

Eye: Causes eye irritation.

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

Ingestion: Harmful if swallowed. May cause irritation of the digestive tract.

Inhalation: May be fatal if inhaled. Causes respiratory tract irritation.

Chronic: Chronic beryllium disease, an immunologically mediated response occurring after a latent period ranging from a few weeks to many years, causes difficult breathing on exertion, weight loss, nonproductive cough, fatigue, chest pain, anorexia, and weakness.

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: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid immediately.

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.

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: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

Flash Point: Not available.

Autoignition Temperature: Not available.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: Not published.

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.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid contact with skin and eyes. Avoid ingestion and inhalation.

Storage: Store in a cool, dry place.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Beryllium oxide	0.002 mg/m ³ TWA (as Be) (listed under Beryllium compounds, n.o.s.).0.01 mg/m ³ STEL (as Be) (listed under Beryllium compounds, n.o.s.).	4 mg/m ³ IDLH (as Be) (listed under Beryllium compounds, n.o.s.).	2 ug/m ³ TWA (listed under Beryllium compounds, n.o.s.).5 æg/m ³ Ceiling (listed under Beryllium compounds, n.o.s.).

OSHA Vacated PELs: Beryllium 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 gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to minimize contact with skin.

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: Pellets

Appearance: white

Odor: Not available.

pH: Not available.

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate:Not available.

Viscosity: Not available.

Boiling Point: 3900 deg F

Freezing/Melting Point:2507 deg F

Decomposition Temperature:Not available.

Solubility: Slightly soluble.

Specific Gravity/Density:3.0100g/cm³

Molecular Formula:BeO

Molecular Weight:25.00

Section 10 - Stability and Reactivity

Chemical Stability: Not available.

Conditions to Avoid: Not available.

Incompatibilities with Other Materials: Not available.

Hazardous Decomposition Products: Not available.

Hazardous Polymerization: Not available.

Section 11 - Toxicological Information

RTECS#:

CAS# 1304-56-9: DS4025000

LD50/LC50:

CAS# 1304-56-9:

Oral, mouse: LD50 = 2062 mg/kg;

Carcinogenicity:

CAS# 1304-56-9:

- **ACGIH:** A1 - Confirmed Human Carcinogen (listed as 'Beryllium compounds, n.o.s.').
- **California:** carcinogen, initial date 10/1/87 (listed as Beryllium compounds, n.o.s.).
- **NTP:** Known carcinogen (listed as Beryllium compounds, n.o.s.).
- **IARC:** Group 1 carcinogen (listed as Beryllium compounds, n.o.s.).

Epidemiology: Epidemiologic studies have demonstrated a statistically significant increase in lung cancer mortality in beryllium-exposed workers.

Teratogenicity: No data available.

Reproductive Effects: No data available.

Mutagenicity: No data available.

Neurotoxicity: No data available.

Other Studies:

Section 12 - Ecological Information

No information available.

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: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	DOT regulated - small quantity provisions apply (see 49CFR173.4)	BERYLLIUM COMPOUNDS NOS (BERYLLIUM OXIDE)
Hazard Class:		6.1
UN Number:		UN1566
Packing Group:		II

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 1304-56-9 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

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 1304-56-9: immediate, delayed.

Section 313

This material contains Beryllium oxide (listed as Beryllium compounds, n.o.s.), 99.99%, (CAS# 1304-56-9) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

CAS# 1304-56-9 (listed as Beryllium compounds, n.o.s.) 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:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA. CAS# 1304-56-9 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# 1304-56-9 can be found on the following state right to know lists: California, (listed as Beryllium compounds, n.o.s.), New Jersey, Pennsylvania, Minnesota, (listed as Beryllium compounds, n.o.s.), 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 Beryllium oxide, listed as 'Beryllium compounds, n.o.s.', a chemical known to the state of California to cause cancer.

California No Significant Risk Level: CAS# 1304-56-9: 0.1 æg/day NSRL

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

T+

Risk Phrases:

R 25 Toxic if swallowed.

R 26 Very toxic by inhalation.

R 36/37/38 Irritating to eyes, respiratory system and skin.

R 43 May cause sensitization by skin contact.

R 49 May cause cancer by inhalation.

R 48/23 Toxic : danger of serious damage to health by prolonged

exposure through inhalation.

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.

WGK (Water Danger/Protection)

CAS# 1304-56-9: No information available.

Canada - DSL/NDSL

CAS# 1304-56-9 is listed on Canada's NDSL List.

Canada - WHMIS

This product has a WHMIS classification of B4, D1A, D2A, D2B.

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# 1304-56-9 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information
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MSDS Creation Date: 9/02/1997

Revision #3 Date: 5/04/2004

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.