



SAFETY DATA SHEET

1. Identification

Product identifier	Beryllium Oxide Powder
Other means of identification	M02
SDS number	
Synonyms	Beryllium Oxide, Beryllia, ABOX, ABHF
Manufacturer/Importer/Supplier/Distributor information	
Manufacturer	
Company name	American Beryllia Inc.
Address	16 First Avenue Haskell, New Jersey 07420 United States
Telephone	(973) 248-8080
Website	www.americanberyllia.com
E-mail	info@americanberyllia.com
Emergency phone number	800-424-9300

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Sensitization, respiratory	Category 1
	Sensitization, skin	Category 1
	Carcinogenicity	Category 1
	Specific target organ toxicity, repeated exposure	Category 1 (Respiratory system)
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	

Label Elements



www.AmericanBeryllia.com

American Beryllia Inc
16 First Avenue
Haskell NJ 07420
973 248-8080
973 248-8013 fax

Signal word	Danger
Hazard statement	May cause cancer by inhalation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause damage to organs (respiratory system) through prolonged or repeated exposure.
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and accumulation. Do not breathe dust/fume. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection. If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and keep comfortable for breathing. If skin irritation or rash occurs: Get medical advice/attention.
Response	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. Wash contaminated clothing before reuse.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	For further information, please contact the Product Stewardship Department at +1.800.862.4118.

3. Composition/Information on Ingredients

Substances

Chemical name	Common name and synonyms	CAS number	%
Beryllium Oxide Powder	Beryllium Oxide BeO Berlon ABOX ABHF	1304-56-9	100

4. First-Aid Measures

Inhalation	If symptoms develop move victim to fresh air. For breathing difficulties, oxygen may be necessary. Breathing difficulty caused by inhalation of particulate requires immediate removal to fresh air. If breathing has stopped, perform artificial respiration and obtain medical help.
Skin contact	Take off contaminated clothing and wash before reuse. Thoroughly wash skin cuts or wounds to remove all particulate debris from the wound. Seek medical attention for wounds that cannot be thoroughly cleansed. Treat skin cuts and wounds with standard first aid practices such as

cleansing, disinfecting and covering to prevent wound infection and contamination before continuing work. Obtain medical help for persistent irritation. Material accidentally implanted or lodged under the skin must be removed.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention if symptoms persist

Ingestion If swallowed, seek medical advice immediately and show this container or label. Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and May cause allergic skin reaction. May cause allergic respiratory reaction. Prolonged exposure may cause chronic effects.

General Information

Indication of immediate medical attention and special treatment needed

Treatment of Chronic Beryllium Disease: There is no known treatment which will cure chronic beryllium disease. Prednisone or other corticosteroids are the most specific treatment currently available. They are directed at suppressing the immunological reaction and can be effective in diminishing signs and symptoms of chronic beryllium disease. In cases where steroid therapy has had only partial or minimal effectiveness, other immunosuppressive agents, such as cyclophosphamide, cyclosporine, or methotrexate, have been used. These latter agents remain investigational. Further, in view of the potential side effects of all the immunosuppressive medications, including steroids such as prednisone, they should be used only under the direct care of a physician. In general, these medications should be reserved for cases with significant symptoms and/or significant loss of lung function. Other symptomatic treatment, such as oxygen, inhaled steroids or bronchodilators, may be prescribed by some physicians and can be effective in selected cases.

The decision about when and with what medication to treat is a judgment situation for individual physicians. For the most part, treatment is reserved for those persons with symptoms and measurable loss of lung function. The value of starting oral steroid treatment, before signs or symptoms are evident, remains a medically unresolved issue.

The effects of continued low exposure to beryllium are unknown for individuals who are sensitized to beryllium or who have a diagnosis of chronic beryllium disease. It is generally recommended that persons who are sensitized to beryllium or who have CBD terminate their occupational exposure to beryllium.

If exposed or concerned: get medical attention/advice. Get medical attention if symptoms occur. Wash contaminated clothing before reuse.

5. Firefighting Measures

Suitable extinguishing media The product is non-combustible. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Do not use water to extinguish fires around operations involving molten metal due to the potential for steam explosions.

Specific hazards arising from the chemical Not applicable.

Special protective equipment and precautions for firefighters	Firefighters should wear full protective clothing including self-contained breathing apparatus. Wear suitable protective equipment.
Firefighting equipment/instructions	Move containers from fire area if you can do so without risk. Water runoff can cause environmental damage.
Specific methods	Pressure-demand self-contained breathing apparatus must be worn by firefighters or any other persons potentially exposed to the particulate released during or after a fire.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	In solid form this material poses no special clean-up problems. Wear appropriate protective equipment and clothing during clean-up.
Methods and materials for containment and cleaning up	Clean up in accordance with all applicable regulations.
Environmental precautions	Avoid release to the environment. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and Storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and accumulation. Do not breathe dust/fume. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection. Wash thoroughly after handling. When using, do not eat, drink or smoke. Contaminated work clothing must not be allowed out of the workplace.
Conditions for safe storage, including any incompatibilities	Keep locked-up. Avoid contact with acids and alkalis. Avoid contact with oxidizing agents.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-2 (29 CFR 1910.1000)

<u>Material</u>	<u>Type</u>	<u>Value</u>
Beryllium Oxide Powder (CAS 1304-56-9)	Ceiling	0.005 mg/m ³
	TWA	0.002 mg/m ³

US. ACGIH Threshold Limit Values

Material	Type	Value	Form
Beryllium Oxide Powder (CAS 1304-56-9)	TWA	0.00005 mg/m3	Inhalable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Material	Type	Value
Beryllium Oxide Powder (CAS 1304-56-9)	Ceiling	0.0005 mg/m3

Biological limit values No biological exposure limits noted for the ingredient(s).

Control parameters WORK PRACTICES: Develop work practices and procedures that prevent particulate from coming in contact with worker skin, hair, or personal clothing. If work practices and/or procedures are ineffective in controlling airborne exposure or visual particulate from deposition on skin, hair, or clothing, provide appropriate cleaning/washing facilities. Procedures should be written that clearly communicate the facility's requirements for protective clothing and personal hygiene. These clothing and personal hygiene requirements help keep particulate from being spread to non-production areas or from being taken home by the worker. Never use compressed air to clean work clothing or other surfaces.

Fabrication processes may leave a residue of particulate on the surface of parts, products or equipment that could result in employee exposure during subsequent material handling activities. As necessary, clean loose particulate from parts between processing steps. As a standard hygiene practice, wash hands before eating or smoking.

WET METHODS: Machining operations are usually performed under a liquid lubricant/coolant flood which assists in reducing airborne particulate. However, the cycling through of machine coolant containing finely divided particulate in suspension can result in the concentration building to a point where the particulate may become airborne during use. Certain processes such as sanding and grinding may require complete hooded containment and local exhaust ventilation. Prevent coolant from splashing onto floor areas, external structures or operators' clothing. Utilize a coolant filtering system to remove particulate from the coolant.

HOUSEKEEPING: Use vacuum and wet cleaning methods for particulate removal from surfaces.

Be certain to de-energize electrical systems, as necessary, before beginning wet cleaning. Use vacuum cleaners with high efficiency particulate air (HEPA). Do not use compressed air, brooms, or conventional vacuum cleaners to remove particulate from surfaces as this activity can result in elevated exposures to airborne particulate.

Follow the manufacturer's instructions when performing maintenance on HEPA filtered vacuums used to clean hazardous materials. Individual protection measures, such as personal protective equipment Wear approved safety glasses, goggles, face shield and/or welder's helmet when risk of eye injury is present, particularly during operations that generate particulate such as melting, casting, machining, grinding, welding and powder handling.

Skin protection Wear gloves to prevent contact with particulate or solutions. Wear gloves to prevent metal cuts and

Hand protection	skin abrasions during handling.
Other	Protective overgarments or work clothing must be worn by persons who may become contaminated with particulate during activities such as machining, furnace rebuilding, air cleaning equipment filter changes, maintenance, furnace tending, etc. Skin contact with this material may cause, in some sensitive individuals, an allergic dermal response. Particulate that becomes lodged under the skin has the potential to induce sensitization and skin lesions.
Respiratory protection	When airborne exposures exceed or have the potential to exceed the occupational exposure limits, approved respirators must be used as specified by an Industrial Hygienist or other qualified professional. Respirator users must be medically evaluated to determine if they are physically capable of wearing a respirator. Quantitative and/or qualitative fit testing and respirator training must be satisfactorily completed by all personnel prior to respirator use. Users of tight fitting respirators must be clean shaven on those areas of the face where the respirator seal contacts the face. Use pressure-demand airline respirators when performing jobs with high potential exposures such as changing filters in a baghouse air cleaning device.
Thermal hazards	Not applicable.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Appearance	
Physical state	Solid.
Form	Powder.
Color	Clear. Off-white.
Odor	Not applicable.
Odor threshold	Not applicable.
pH	Not applicable.
Melting point/freezing point	4586 °F (2530 °C)
Initial boiling point and boiling range	7052 °F (3900 °C)
Flash point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit – lower(%)	Not applicable.
Flammability limit – upper(%)	Not applicable.
Explosive limit - lower (%)	Not applicable.
Explosive limit - upper (%)	Not applicable.
Vapor pressure	< 0.0000001 kPa at 25 °C
Vapor density	Not applicable.
Relative density	Not applicable.
Solubility(ies)	

Solubility (water)	Not applicable.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not applicable.
Viscosity	Not applicable.
Other information	
Density	3.01 g/cm ³ Theoretical
Explosive properties	Not explosive.
Molecular formula	Be-O
Molecular weight	25.01 g/mol
Oxidizing properties	Not oxidizing.
Specific gravity	3.01 g/cm ³ Theoretical

10. Stability and Reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid dust formation. Contact with acids. Contact with alkalis.
Incompatible materials	Strong acids, alkalis and oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological Information

Information on likely routes of exposure

Inhalation	May cause sensitization by inhalation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause damage to organs (respiratory system) through prolonged or repeated exposure.
Skin contact	May cause an allergic skin reaction.
Eye contact	May cause eye irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Respiratory disorder.

Information on toxicological effects

Acute toxicity	May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction.
Skin corrosion/irritation	May cause allergic skin reaction.
Serious eye damage/eye irritation	Harmful in contact with eyes.

Respiratory or skin sensitization

ACGIH Sensitization

Beryllium Oxide Powder (CAS 1304-56-9)

Respiratory sensitization

Respiratory sensitization May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity Due to lack of data the classification is not possible.

Carcinogenicity Cancer hazard.

IARC Monographs. Overall Evaluation of Carcinogenicity

Beryllium Oxide Powder (CAS 1304-56-9)

1 Carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens

Beryllium Oxide Powder (CAS 1304-56-9)

Known To Be Human
Carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) Not listed.

Reproductive toxicity Not classified.

Specific target organ toxicity -
single exposure May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Specific target organ toxicity -
repeated exposure May cause damage to organs (respiratory system) through prolonged or repeated exposure by inhalation.

Aspiration hazard Due to lack of data the classification is not possible.

Chronic effects Hazardous by OSHA criteria. May cause damage to organs through prolonged or repeated exposure.

Further information Symptoms may be delayed.

12. Ecological information

Ecotoxicity No ecotoxicity data noted for the ingredient(s).

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential Not available.

Mobility in soil Not available.

Other adverse effects Not available.

13. Disposal considerations

Disposal instructions Material should be recycled if possible. Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal. When this product as supplied is to be discarded as waste, it does not meet the definition of a RCRA waste under 40 CFR 261.

Hazardous waste code Not regulated.

Waste from residues / unused products Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN1566
UN proper shipping name	Beryllium compounds, n.o.s.
Transport hazard class(es)	
Class	6.1(PGI, II)
Subsidiary risk	-
Label(s)	6.1
Packing group	II
Special precautions for user	Not available.
Special provisions	IB8, IP2, IP4, T3, TP33
Packaging exceptions	153
Packaging non bulk	212
Packaging bulk	242

IATA

UN number	UN1566
UN proper shipping name	Beryllium compound, n.o.s.
Transport hazard class(es)	
Class	6.1(PGI, II)
Subsidiary risk	-
Packing group	II
Environmental hazards	No.
ERG Code	6L
Special precautions for user	Not available.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

UN number	UN1566
UN proper shipping name	BERYLLIUM COMPOUND, N.O.S.
Transport hazard class(es)	
Class	6.1(PGI, II)
Subsidiary risk	-
Packing group	II
Environmental hazards	
Marine pollutant	No.

EmS
Special precautions for user

F-A, S-A
Not available.

DOT



15 Regulatory Information

US federal regulations

All components are on the U.S. EPA TSCA Inventory List.
This product is a "Hazardous Chemical" as defined by the
OSHA Hazard Communication Standard, 29 CFR 1910.1200

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Beryllium Oxide Powder (CAS 1304-56-9)

Listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes

Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No
SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

<u>Chemical name</u>	<u>CAS number</u>	<u>% by wt.</u>
Beryllium Oxide Powder	1304-56-9	100

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Beryllium Oxide Powder (CAS 1304-56-9)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)Not regulated.

Clean Water Act (CWA) Priority pollutant

Section 112(r) (40 CFR 68.130) Toxic pollutant

Safe Drinking Water Act (SDWA) 0.004 mg/l
0.004 mg/l

US state regulations WARNING: This product contains a chemical known to the State of California to cause cancer.

US - New Jersey RTK - Substances: Listed substance

Beryllium Oxide Powder (CAS 1304-56-9)

US - Pennsylvania RTK - Hazardous Substances: Special hazard

Beryllium Oxide Powder (CAS 1304-56-9)

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100) Not listed.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Beryllium Oxide Powder (CAS 1304-56-9) US. Massachusetts RTK - Substance List

Beryllium Oxide Powder (CAS 1304-56-9)

US. New Jersey Worker and Community Right-to-Know Act

Beryllium Oxide Powder (CAS 1304-56-9)

US. Pennsylvania RTK - Hazardous Substances

Beryllium Oxide Powder (CAS 1304-56-9)

US. Pennsylvania Worker and Community Right-to-Know Law

Beryllium Oxide Powder (CAS 1304-56-9) US. Rhode Island RTK

Beryllium Oxide Powder (CAS 1304-56-9) US. California Proposition 65

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Beryllium Oxide Powder (CAS 1304-56-9)

Listed: October 1, 1987

16. Other information, including date of preparation or last revision

Issue date 10-19-2015

Version 1

Further information Transportation Emergency
Call Chemtrec at:
Domestic: 800.424.9300
International: 703.527.3887

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