

Beryllium Hazards in the Mining Industry



Health Hazard Information Card HH-32

What is beryllium?

Beryllium is an extremely lightweight and hard metal found in nature in beryl or bertrandite rock. Beryllium is a good conductor of electricity and heat, is nonsparking, and is nonmagnetic.

Why is beryllium a health hazard?

Inhalation of beryllium dust or fumes may cause a serious chronic lung disease among exposed workers.

How could I be exposed to beryllium?

Most miners in the United States are not at risk of exposure to beryllium dust or fumes when mining rock which contains beryllium. Instead, occupational exposure most often occurs at the manufacturing plant during the extraction and in the processing of alloy metals containing dust or fumes from beryllium metal, metal oxides, alloys, ceramics, or salts.

How could I limit beryllium exposure at work?

Dust control is the primary preventive measure. If the rock you mine contains beryllium, follow proper clean-up and housekeeping measures to keep the dust from becoming airborne.

- Use water to suppress the dust.
- Wet sweep or use a vacuum with a high-efficiency filter that is specifically designed to capture beryllium dust.
- Never use compressed air, a shovel, dry sweeping or other dry clean-up method to remove beryllium dust.
- Use local exhaust ventilation.

Personal protective clothing that is disposable or has been appropriately cleaned should be provided each day. If not, then work clothes should be vacuumed using a specially designed beryllium vacuum before being removed.

- Respirators should not be taken off until any beryllium contaminated clothing is removed.
- Shower and changing facilities should be provided for miners to ensure that beryllium is not carried into employees' homes. Don't take beryllium contaminated clothing home with you.

Will a respirator protect me from airborne beryllium?

When required, respiratory protection should be used as a supplement to effective engineering controls.

- Respirators must be approved by the National Institute for Occupational Safety and Health (NIOSH) as suitable for protection from beryllium dust.
- Miners required to wear respirators must be properly fit-tested and trained.
- Mine operators must establish a formal respiratory protection program that complies with ANSI Z88.2-1969.

If beryllium is present, what training on the health hazards of beryllium should I have?

Training should include:

- where beryllium occurs in the work place;
- what engineering controls have been installed to minimize exposure, and how to use and maintain controls;
- the proper use of personal protective equipment;
- the importance of avoiding skin contact; and
- specific work practices that can be used to reduce exposure to beryllium.

Who can I contact for additional information?

If you have questions about any occupational health matter, feel free to contact your local MSHA office or MSHA's national Metal and Nonmetal health office at (703) 235-8307 or visit the MSHA homepage at <http://www.msha.gov>.

*U.S. Department of Labor
 Mine Safety and Health Administration
 Visit our Web site at www.msha.gov*

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