Occupational Safety and Health Administration

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# Beryllium Public FAQs

## Why is OSHA proposing a beryllium rule?

- OSHA is proposing a new beryllium standard to replace the existing, outdated Permissible Exposure Limits (PELs) for beryllium exposure, which date back to 1971 and based on research in the 1940's. The proposed standard is intended to reduce the risk of chronic beryllium disease (CBD), beryllium sensitization, and lung cancer among beryllium-exposed workers and to provide consistent protection for all workers covered.
- The need for a revised standard is supported by industry and labor: Materion Corporation, a leading producer of beryllium and beryllium products in the United States, and the United Steelworkers (USW), an international labor union representing workers who manufacture beryllium alloys and beryllium-containing products in a number of industries. Many provisions of OSHA's proposed standard also appeared in a draft recommended standard for beryllium that was jointly developed by Materion and the USW and submitted for OSHA's consideration in 2012.

## Why is it important to limit exposure to beryllium?

- Workers who inhale beryllium particles are at risk of developing a serious beryllium-related lung disease called chronic beryllium disease (CBD). CBD is a debilitating, incurable, and sometimes fatal lung disease. Prior to developing CBD, workers must first become sensitized to beryllium. Sensitization occurs when there is an extreme reaction by the body's immune system from beryllium exposure through either inhalation or skin contact.
- Occupational exposure to beryllium has also been linked to lung cancer. Beryllium is classified as a human carcinogen by the U.S. Department of Health and Human Services National Toxicology Program and the International Agency for Research on Cancer.

## What does the proposed rule do?

- OSHA is proposing a new standard requiring employers to reduce worker exposure to beryllium. More specifically, OSHA proposes to lower the 8 hour time-weighted average (TWA) PEL for beryllium for general industry from the current standard of 2.0 micrograms of beryllium per cubic meter ($\mu g/m^3$) TWA to 0.2 $\mu g/m^3$ TWA. OSHA also proposes to lower the acceptable ceiling concentration of 5.0 $\mu g/m^3$ to a short-term exposure limit (STEL) of 2.0 $\mu g/m^3$ as determined over 15 minutes.
- The proposed rule includes additional important provisions, such as requirements for measuring workers' beryllium exposure, limiting workers' access to areas where beryllium exposures are above the limits, implementing effective control methods for reducing exposures, medical surveillance for workers with high beryllium exposures, medical removal protection, training workers about beryllium-related hazards and how to limit exposure, and keeping records of workers' beryllium exposure and medical exams.

## Is this a final rule?

- No. This is a proposed rule on which the agency is seeking public comment. It does not have any immediate impact on the affected industries, nor is it enforceable. At the conclusion of the comment period OSHA will carefully review all comments before promulgating a final rule.

## How can I participate in the beryllium rulemaking process?

- OSHA's rulemaking process relies heavily on input from the public, including the regulated community and other stakeholders. Comments regarding OSHA's proposed beryllium rule can be submitted until November 5, 2015. If requested, OSHA will hold public hearings after the close of the public comment period. If public hearings are held, members of the public that filed a notice of intention to appear can then submit additional comments following the hearings. Additional information on the proposed rule, procedures for submitting comments, and the public hearings can be found at www.osha.gov/beryllium.

## Who is at risk from exposure to beryllium?

- OSHA estimates that approximately 35,000 workers in general industry are potentially exposed to beryllium. Beryllium workers in primary beryllium manufacturing and alloy production, machining and fabrication, and recycling have the highest risk of exposure to beryllium. Exposures occur when beryllium and beryllium-containing alloys are processed in a way that releases beryllium dust, fume, mist or other form of beryllium into the workplace air. The majority of worker exposures to beryllium occur in general industry operations such as foundry and smelting operations, machining, beryllium oxide ceramics manufacturing, and dental lab work.
- Workers at coal-burning power plants and aluminum production facilities not covered by the proposed rule may come in contact with beryllium in coal fly ash or crude aluminum ore due to trace amounts of beryllium in the raw materials. Similarly, in the construction and shipyards industries, also not covered by the proposed rule, abrasive blasters and support personnel may be exposed to beryllium from slags that contain beryllium as a trace element. The proposal discusses various alternatives relating to these beryllium-exposed workers and how existing standards protect these workers. OSHA seeks comment on whether these workers should be covered by the final rule.

## What are the benefits of the proposed rule?

- Once the full effects of the rule are realized, the proposed rule is expected to prevent nearly 100 fatalities annually from chronic beryllium disease and lung cancer. The proposed rule is estimated to average $575.8 million in annual benefits for the next 60 years, far outweighing the expected cost of $37.6 million annually for workplaces covered by the rule.

Additional information about the proposed rule is available at www.osha.gov/beryllium. The website provides additional information on the hazards of occupational exposure to beryllium with links to fact sheets and an updated beryllium safety and health topics page, and further explains the provisions of the proposed rule and how to participate in the development of a final rule.