

## OSHA's Proposed Beryllium Rule: Overview

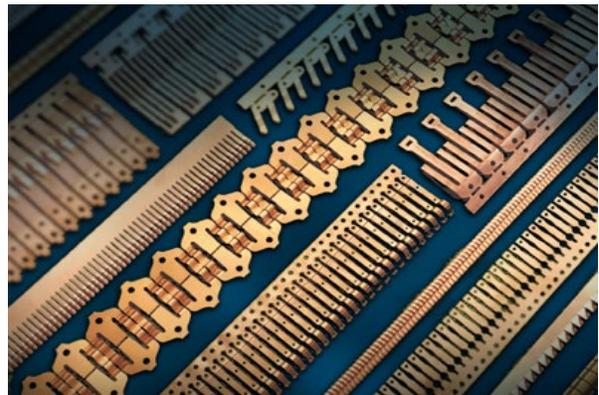
**Beryllium is an important but toxic material used primarily in specialty alloys and beryllium oxide ceramics and composites, with industrial applications such as consumer electronics components and satellite communication modules. Workers who inhale beryllium particles are at risk of developing a serious 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 a reaction by the body's immune system from beryllium exposure through either inhalation or skin contact. Airborne beryllium exposure also puts workers at risk for developing lung cancer.**

To improve worker protection, the Occupational Safety and Health Administration (OSHA) is proposing a new beryllium standard including lower permissible exposure limits (PELs) for general industry that will replace the existing outdated PELs. The proposal is based on extensive review of scientific evidence, current industry consensus standards, and information collected by OSHA, including meetings with stakeholder groups such as employers (including small businesses) and employee organizations.

OSHA encourages the public to participate in this rulemaking. Information on submitting comments on the proposed rule and participating in public hearings can be found at [www.osha.gov/beryllium](http://www.osha.gov/beryllium). Your input will help OSHA develop a final rule for beryllium that adequately protects workers, is feasible for employers, and is based on the best available evidence.

### Why is OSHA proposing a beryllium rule?

- Strong evidence shows that the current beryllium PELs do not adequately protect workers. Like other outdated PELs, the current beryllium PELs do not reflect more recent scientific evidence. For example, since the PELs were adopted in 1971, based on research from the 1940s, the U.S. National Toxicology Program and the International Agency for Research on Cancer have identified beryllium as a human carcinogen.
- The current beryllium PELs do not adequately protect workers from chronic beryllium disease, beryllium sensitization, and lung cancer.



*Copper Beryllium Alloy Strip Components for Electronic End Use Applications*

Photo courtesy of Materion

### Who would be affected by the proposed rule?

About 35,000 workers are exposed to beryllium in their workplaces. Exposures occur when beryllium and beryllium-containing alloys are processed in a way that releases beryllium dust, fume, mist or other form into the workplace air. The majority of worker exposures to beryllium occur in general industry operations covered by the proposed rule such as foundry and smelting operations, machining, beryllium oxide ceramics and composites manufacturing, and dental lab work. In addition, general industry workers in coal-burning plants and aluminum production not covered by the proposed rule may come in contact with beryllium as a trace element in coal fly ash and crude aluminum ore. 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 to protect these workers from beryllium exposure and how existing standards protect these workers. OSHA seeks comment on whether to cover these workers under the final rule.



Photo courtesy of Materion

Beryllium Ceramic Parts: Laser Bores for Medical Applications

### What would the proposed rule require?

Workers in general industry would be protected under a new PEL of 0.2 micrograms of respirable beryllium per cubic meter of air ( $\mu\text{g}/\text{m}^3$ ), averaged over 8 hours. The proposed rule also includes additional important provisions, such as requirements for:

- Measuring workers' beryllium exposure,
- Limiting workers' access to areas where beryllium exposures are above the PEL,
- Implementing effective control methods for reducing exposures,
- Medical surveillance, including medical exams, for workers with high beryllium exposures,

- Medical removal protections,
- Training workers about beryllium-related hazards and how to limit exposure, and
- Keeping records of workers' beryllium exposure and medical exams.

These provisions are similar to OSHA health standards for other substances, as well as current industry practices for beryllium that many responsible employers have been using for years.

### What economic effects are expected?

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. The proposed rule is expected to cost \$37.6 million annually for workplaces covered by the rule.

### How can I learn more about the proposed rule?

Visit OSHA's Beryllium Rulemaking webpage at [www.osha.gov/beryllium](http://www.osha.gov/beryllium).

**This is one in a series of informational fact sheets highlighting OSHA programs, policies or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to Title 29 of the Code of Federal Regulations. This information will be made available to sensory-impaired individuals upon request. The voice phone is (202) 693-1999; teletypewriter (TTY) number: (877) 889-5627.**

**For assistance, contact us. We can help. It's confidential.**



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