COMPLIANCE BULLETIN

HIGHLIGHTS

- The final rule reduces the TWA PEL to 0.2 µg/m^3 and creates a STEL PEL of 2.0 µg/m^3.
- The final rule also creates a new action level of 0.1 µg/m^3 calculated as an eight-hour time-weighted average.
- Additional employer obligations include periodic exposure assessment, PPE, hygiene and housekeeping practices, and hazard communication.

IMPORTANT DATES

January 9, 2017
Final rule on occupational exposure to beryllium is issued.

March 10, 2017
Final rule becomes effective.

March 12, 2018
Most provisions of the final rule become enforceable.

Provided By:
Marshall & Sterling, Inc.

OSHA Adopts New Beryllium Standards

OVERVIEW

On **Jan. 9, 2017**, the Occupational Safety and Health Administration (OSHA) issued a final rule that amends its beryllium standards for the general, construction and shipyard industries.

The final rule sets a new permissible exposure level (PEL) and requires new provisions to protect workers, including exposure control measures, exposure assessments, respiratory protection, personal protective clothing and equipment, and new conventions for housekeeping, medical surveillance, hazard communication and recordkeeping.

The final rule becomes effective on **March 10, 2017**, though compliance is not required on most provisions until **March 12, 2018**.

ACTION STEPS

Employers should become familiar with the new standards and evaluate their current workplace practices and training programs to ensure compliance with the final rule by the applicable deadlines.

Marshall & Sterling INSURANCE

Beryllium

Beryllium is a metal that is lighter than aluminum and stronger than steel. Beryllium is also durable, stable, conductive and nonmagnetic. Because of its properties, beryllium is often used as an alloying agent to produce beryllium copper, and it can be found in nuclear reactors, machine parts and springs, complex electronic equipment and aircraft.

However, beryllium is also very toxic. Exposure to unsafe beryllium levels can cause respiratory problems and skin disease. Beryllium exposure can also affect an individual's eyes, liver, kidneys, heart, nervous system and lymphatic system. Also, beryllium is a known cancer-causing substance.

Affected Employers

OSHA estimates that approximately 35,000 workers are exposed to beryllium in approximately 4,088 establishments in the United States. However, even though the highest risk of exposure for workers is at the workplace, exposure can also happen through contaminated clothing and vehicles and can affect a worker's family members and the general public.

Employers in manufacturing and alloy production, machining and fabrication, and recycling have traditionally shown the highest average exposures to beryllium.

New PELs

The final rule establishes two new PELs that apply to beryllium in all of its forms, compounds and mixtures. These standards are:

TWA PEL 0.2 µg/m^3

An eight-hour time-weighted average (TWA) PEL of 0.2 micrograms per cubic meter of air

&

STEL PEL 2.0 µg/m^3

A 15-minute short-term exposure limit (STEL) of 2.0 micrograms per cubic meter of air

TWA PEL

The TWA PEL dictates that employers cannot allow the average worker exposure during an eight-hour work shift to exceed 0.2 µg/m^3. The new TWA PEL represents one-tenth of the previous PEL. The new TWA PEL is ten times smaller than the previous PEL because OSHA found that the previous standard posed a "significant risk of material impairment of health to exposed workers."

Even though OSHA concluded that a TWA PEL of 0.1 µg/m^3 was preferable, it chose to adopt the 0.2 PEL out of concerns over the feasibility of implementing a 0.1 TWA PEL.

STEL PEL

The STEL PEL, or ceiling limit, was adopted because even the 0.2 µg/m^3 TWA PEL continues to pose a significant health hazard to workers. The STEL PEL is intended to protect workers from the harm that may result from beryllium exposures that, though brief, exceed the TWA PEL.

This Compliance Bulletin is not intended to be exhaustive nor should any discussion or opinions be construed as legal advice. Readers should contact legal counsel for legal advice.

© 2017 Zywave, Inc. All rights reserved. JPA 1/17

The final rule sets the beryllium STEL PEL at than 2.0 µg/m^3 of beryllium in any 15-minute sample during the work shift. Employers will be required to make sure that no worker is exposed to a higher concentration. Employers will need to measure their STEL PEL during the highest-exposure operations performed by workers.

Action Level

The final rule also implements an action level for beryllium. Under the final rule, the action level for beryllium is a concentration of airborne beryllium of 0.1 µg/m^3 calculated as an eight-hour TWA. When beryllium concentrations are equal to or higher than the action level trigger, an employer may have to:

- ✓ Conduct periodic exposure monitoring (if the employer is following the scheduled monitoring option);
- ✓ List the operations and job titles that are reasonably expected to expose workers at or above the action level as part of their written exposure control plan;
- ✓ Ensure that at least one of the controls listed by the final rule is set in place (unless the employer can demonstrate, for each operation or process, that such controls are either not feasible or that worker exposures are below the action level based on at least two representative personal breathing zone samples taken at least seven days apart);
- ✓ Provide employee medical surveillance for employees that are exposed at or above the action level for more than 30 days per year (an employer's medical surveillance obligations allow affected employees to receive exams at least every two years at no cost to the employee);
- ✓ Follow medical removal protocols. Employees eligible for removal can choose to remain in environments with exposures at or above the action level, provided they wear respirators. These employees may also choose to be transferred to comparable work in environments with exposures below the action level. However, if comparable work is not available, the employer must maintain the employee's earnings and benefits for six months or until comparable work becomes available.

Additional Requirements

The table below provides a summary of additional requirements and changes imposed by the final rule.

Exposure Assessment	• Employers must provide exposure assessment when workers are reasonably expected to be exposed to airborne beryllium. • Employers may choose between the performance or schedule monitoring options.
Beryllium Work Areas	• Employers in the general and shipyard industries must establish, maintain, demarcate and limit access to certain areas to limit worker exposure. • Employers in the construction industry must designate a "competent person" to demarcate certain areas of beryllium exposure.

This Compliance Bulletin is not intended to be exhaustive nor should any discussion or opinions be construed as legal advice. Readers should contact legal counsel for legal advice.

© 2017 Zywave, Inc. All rights reserved. JPA 1/17

Written Exposure Plan	• Employers must establish, implement, and maintain a written exposure control plan and specify the information that must be included in the plan. • Written exposure plans must be reviewed annually and updated as required. • Employers must also make a copy of the written plan to any employee who is, or can reasonably be expected to be, exposed to airborne beryllium.
Respiratory Protection	• Employers must provide adequate respiratory protection at no cost to their employees. Powered air-purifying respirators (PAPRs) instead of negative pressure respirators must be provided if requested by employees. • Employers must ensure that employees use respiratory protection in certain situations.
Personal Protective Equipment (PPE)	• Employers must provide adequate PPE to their employees when: ○ Exposure exceeds, or can reasonably be expected to exceed, the TWA PEL or STEL; and ○ There is reasonable expectation of dermal contact with beryllium. • Employers must follow the final rule's updated standards for appropriate removal, storage, cleaning and replacement of required PPE.
Hazard Communication	• Employers have to take additional steps to warn and train employees about beryllium hazards.
Housekeeping	• Employers in the general industry must: ○ Maintain all surfaces in beryllium work areas as free as practicable of beryllium; ○ Clean spills and emergency releases of beryllium promptly; ○ Use appropriate cleaning methods; and ○ Dispose of materials containing or contaminated with beryllium properly. • Employers in the shipyard and construction industries must: ○ Follow the required written exposure control plan when cleaning beryllium-contaminated areas; ○ Use appropriate cleaning methods, and ○ Provide beryllium-containing material recipients for use or disposal with a copy of the hazard communication or warning described in the final rule.
Hygiene Areas and Practices	• Under specified circumstances, employers must provide employees with readily accessible washing facilities and change rooms (access to showers for employee use may also be required by the general industry standard). • Employers must take certain steps to minimize exposure in eating and drinking areas.

This Compliance Bulletin is not intended to be exhaustive nor should any discussion or opinions be construed as legal advice. Readers should contact legal counsel for legal advice.

© 2017 Zywave, Inc. All rights reserved. JPA 1/17

Appendix A

The final rule also includes Appendix A to the final standard for the general industry. This appendix provides information to employers on recommended control options that employers could use to comply with their requirement to reduce exposure to airborne beryllium in beryllium work areas.

However, compliance with the information in Appendix A is recommend, not required. OSHA stated in the final rule "Appendix A is for informational and guidance purposes only and none of the statements in Appendix A should be construed as imposing a mandatory requirement on employers that is not otherwise imposed by the standard. In addition, this appendix is not intended to detract from any obligation that the rule imposes."

More Information

Please contact Marshall & Sterling, Inc. or visit the OSHA Beryllium webpage for more information on this topic.

This Compliance Bulletin is not intended to be exhaustive nor should any discussion or opinions be construed as legal advice. Readers should contact legal counsel for legal advice.

© 2017 Zywave, Inc. All rights reserved. JPA 1/17