

Risk Management Brief



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Northwestern | Office of Risk Management

OSHA Reduces Employee Exposure to Crystalline Silica

The Occupational Safety and Health Administration (OSHA) reduced the Permissible Exposure Limit (PEL) for crystalline silica by 50% for general industry and 80% for the construction industry after research indicated exposure to crystalline silica can cause lung cancer and kidney disease. PEL's are regulatory limits established by OSHA that quantify the concentration of a substance in the air that an employee can be exposed to in a workday.

OSHA Permissible Exposure Limits (PELs) for Crystalline Silica

Industry	Previous PEL	New PEL	Action Level**
General*	100 $\mu\text{g}/\text{m}^3$	50 $\mu\text{g}/\text{m}^3$	25 $\mu\text{g}/\text{m}^3$
Construction	250 $\mu\text{g}/\text{m}^3$	50 $\mu\text{g}/\text{m}^3$	25 $\mu\text{g}/\text{m}^3$

*Applies to Northwestern

**A concentration for a chemical which initiates certain required activities such as exposure monitoring and medical surveillance.

During construction and renovation activities, Northwestern employees and contractors can potentially be exposed to silica while sawing, chipping, grinding, or drilling silica-containing materials such as asphalt, brick, cement, concrete, drywall, grout, mortar, stone, sand, and tile.

OSHA requires employers such as Northwestern who exceed 50% of the PEL ($25 \mu\text{g}/\text{m}^3$), minimize their silica dust emissions by implementing wet methods that involve wetting the saw blade or using a wet vacuum, no later than June 23, 2018.

In addition to reducing silica exposure, contractors are now required to do the following by June 23, 2017:

- Develop a written plan to minimize silica dust exposure,
- Restrict housekeeping practices to methods such as wet sweeping, HEPA vacuuming, or another method to reduce silica dust,
- Implement a respirator program,
- Train workers on methods to minimize silica dust exposure.

Construction and renovation projects performed by outside contractors, may lead to citations to multiple employers for exposing employees to the same condition.

For example, if a Northwestern employee is exposed to silica dust created by a contractor, the contractor that created the silica may be cited by OSHA and Northwestern could be cited if Northwestern is aware of the hazard and did not take measures to correct the hazard.

To determine if your employees exceed the PEL for crystalline silica exposure, Risk Management offers air sampling services, including silica sampling. In addition, any activities that require wearing a respirator; Risk Management offers on-site respirator fit testing and training to comply with OSHA's respirator requirements.

For additional information on OSHA's new silica standard and how to comply, please contact Gwen Butler at 847.491.4936 or gwen.butler@northwestern.edu.



Work Conducted Without Water Control



Work Conducted with Water