

SAFETY TALK

SILICA



SILICA (PART 2 of 3)

SILICA PEL

The safety amount of silica in the air is zero. The legal limit is called a “Permissible Exposure Limit” or PEL. **The PEL for SiO2 in the air is 50 micrograms per cubic meter.** This limit is for respirable (fine) dust.

Rule-of-thumb: if dust containing silica is visible in the air, it’s almost always over the permissible limit.

This limit is based on an 8-hour average exposure and is very low, because it doesn’t take much silica in the air to cause health problems.

Imagine an extremely tiny pinch of very fine dust dispersed in the air in a 3 square foot square box - you probably couldn’t even see it. Respirable dust is that fine dust that is inhaled deep into the lungs where it causes damage. Coarse dust is caught in the nose and throat before reaching the lungs.

WHERE IS SILICA FOUND ON MY JOB?

Abrasive blasting with silica sand creates extremely high levels of silica dust. Abrasive blasting on concrete with any kind of grit produces high levels of silica dust. Sandblasting concrete (even without silica sand) still results in high levels of silica in the air from the concrete itself.

Other trades/tasks that generate exposures exceeding the PEL include:

- Drywall finishing
- Sanding painted surfaces containing SiO2
- Concrete and masonry building construction
- Earthwork and rock crushing
- Masonry or concrete building construction
- Road construction and repair



In many construction jobs, we have short but high exposures to silica. Every time you inhale silica dust, it’s like inhaling fine, broken glass that scar your lungs. It adds up over time.

Discussion Date: _____

Employees Participating

This safety talk was developed by Safety Controls Technology (SCT)

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