



## PROTECTING WORKERS AGAINST SILICA DUST EXPOSURE

*Crystalline silica exposure is hazardous to your employees. As the new OSHA regulations take effect learn how you can help reduce silicon dioxide hazards in the workplace with Banner Stakes.*

**Crystalline silica** is a common mineral found in the earth's crust. Materials like sand, stone, concrete, and mortar contain crystalline silica. It is also used to make products such as glass, pottery, ceramics, bricks, and artificial stone.

**Respirable crystalline silica** – very small particles at least 100 times smaller than ordinary sand you might find on beaches and playgrounds – is created when cutting, sawing, grinding, drilling, and crushing stone, rock, concrete, brick, block, and mortar. Activities such as abrasive blasting with sand; sawing brick or concrete; sanding or drilling into concrete walls; grinding mortar; manufacturing brick, concrete blocks, stone countertops, or ceramic products; and cutting or crushing stone result in worker exposures to respirable crystalline silica dust. Industrial sand used in certain operations, such as foundry work and hydraulic fracturing (fracking), is also a source of respirable crystalline silica exposure.

Exposure to respirable crystalline silica can occur during common construction tasks, such as using masonry saws, grinders, drills, jackhammers and handheld powered chipping tools; operating vehicle-mounted drilling rigs; milling; operating crushing machines; using heavy equipment for demolition or certain other tasks; and during abrasive blasting and tunneling operations.

Workers who inhale these very small crystalline silica particles are at increased risk of developing serious silica-related diseases, including: Silicosis, an incurable lung disease that can lead to disability and death; Lung cancer; Chronic obstructive pulmonary disease (COPD); and Kidney disease.

To better protect workers exposed to respirable crystalline silica, OSHA has issued two new respirable crystalline silica standards: one for construction, and the other for general industry and maritime.

The standard (29 CFR 1926.1153) requires employers to limit worker exposures to respirable crystalline silica and to take other steps to protect workers.

## ***OSHA's Three Lines of Defense***

To help control the risk of respirable crystalline silica exposure, OSHA's "three lines of defense" philosophy is suggested. The first line of defense is to eliminate and/or engineer the crystalline silica exposure hazard out. Examples of engineering/elimination controls are:

- Isolating workers from exposure with enclosures or barriers
- Installing local exhaust ventilation systems
- Using wet methods for cutting, chipping, drilling, sawing, grinding, etc.
- Using HEPA-equipped vacuums or wet sweeping for cleaning applications
- NOT using compressed air for cleaning applications
- Substituting non-crystalline silica material when possible
- Using tools with dust collection systems

Keeping unprotected workers clear of these areas, and assuring workers are aware they are in silica dust zones are two of the most procedures you can adopt in your working areas. Banner Stakes has solved that problem with new retractable belt barriers in a new messages that fit from 34" doorways to 30' lengths. The PLUS Cart package features 5 barrier posts with a 15' retractable belt featuring the ***"CAUTION- SILICA DUST- OSHA APPROVED PPE REQUIRED"*** message covering up to 75' space around the affected area.

Our Magnetic/Multi-surface wall mount barriers can easily be attached in any standard doorframe and will feature the same messages within the 34" of space while the longer magnetic wall mount barrier can extend up to 30' featuring the same message repeated multiple times to get the point across.

Other options are available please contact us to find the best combination that will work best for your job site.

Here are two YouTube video links concerning our PLUS and Magnetic product lines, these videos are only 90 seconds each and they really help see how our products are used.

- **Magnetic Barrier**      <https://www.youtube.com/watch?v=oRuE-5GmoOc>
- **PLUS Cart Package**      <https://www.youtube.com/watch?v=T8G9I-wREU>

*For more information concerning Banner Stakes Safety & Hazard Communication products, please visit [www.bannerstakes.com](http://www.bannerstakes.com) or email us at [sales@bannerstakes.com](mailto:sales@bannerstakes.com)*

About 2.3 million workers are exposed to silica dust in over 600,000 work sites, so be ready to offer them protection with Banner Stakes!