Respirable Crystalline Silica in General Industry Workplaces

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Respirable Crystalline Silica in General Industrytime Workplaces

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Crystalline Silica
Crystalline Silica Is Found In Many Common Materials
Respirable Crystalline Silica
Respirable Crystalline Silica Standard for General Industry and Maritime
Permissible Exposure Limit (PEL)

50 Micrograms per Cubic Meter of Air ($\mu g/m^3$)

Averaged over an 8-hour work day
Exposure Assessment

Employers must:

• Determine exposures
• Give employees results
• Let representatives observe
Methods of Compliance

Employers must select:
- Engineering controls
- Work practice controls
- Respirators, if needed
Engineering Controls

Cutting stone

No engineering controls

Using water to control dust
Engineering Controls

Grinding Stone

No engineering controls

Using a vacuum dust collection system
Engineering Controls

Employee protected by enclosure that isolates dust during abrasive blasting of dental castings
Work Practice Controls

Example: Fixing controls that are not working properly
Respirators
Specific Protections in This Workplace

Employers must train employees on workplace-specific:

- Engineering controls
- Work practice controls
- Respiratory protection
Workplace Tasks with Exposure

Employers must train employees on tasks in their workplace that may expose them to respirable crystalline silica.
Respiratory Protection

Employers must:

• Provide respirators if needed
• Follow the respiratory protection standard
Regulated Areas

- Establish where exposures are expected to exceed PEL
- Mark off the area
- Post warning signs at entrances
- Limit access
- Provide and require use of respirators
Regulated Area - Warning Sign

DANGER

RESPIRABLE CRYSTALLINE SILICA MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
WEAR RESPIRATORY PROTECTION IN THIS AREA
AUTHORIZED PERSONNEL ONLY
Housekeeping

When cleaning silica dust, avoid:

- Dry sweeping/brushing
- Compressed air without a ventilation system to capture the dust
Housekeeping

Employers must let employees know which housekeeping methods:

– *Must be* used in the workplace

– *Must not be* used in the workplace
Written Exposure Control Plan

Employers must:
• Prepare and implement it
• Review it yearly
• Make it available

Written Exposure Control Plan

Tasks with Exposure:

Engineering/Work Practice Controls:

Respiratory Protection:

Housekeeping:
Medical Surveillance

• For employees exposed to silica for 30 or more days/year:
  o Above the PEL (until June 23, 2020)
  o At or above the action level (starting June 23, 2020)

• Offered:
  o Within 30 days of assignment
  o Every three years
Medical Exams

• Medical and work history

• Physical exam

• X-rays
Medical Exams

Tuberculosis (TB test)

Lung function test
Why Medical Exams are Important

Find disease or increased sensitivity to silica exposure

Determine fitness to use respirator

Department of Labor/Shawn T Moore
Medical Report for the Employee

- Medical conditions
- Recommended limitations on respirator use and exposure to silica
- Recommendation for specialist exam
- Only goes to the employee
Medical Opinion for the Employer

• Only medical info included:
  – Recommended respirator limitations

• Additional information requiring employee consent:
  – Recommended exposure limitations
  – Recommendation for specialist exam
Other Training

- Hazard communication program
- Respiratory protection program
Recordkeeping

Employers must:

• Keep medical and exposure records
• Make them available
More Information

www.osha.gov/silica/