



## CUT THE DUST

### TOOLBOX TALK—Controlling Silica When Cutting Roof Tiles



#### Why This Matters—Silica Is Deadly

- Respirable Crystalline Silica (RCS) is created when materials such as concrete, clay tiles, slate, mortar and brick are cut, drilled, sanded or ground.
- RCS particles are approximately 100 times smaller than a grain of sand. They are invisible to the naked eye but can be inhaled deep into the lungs.
- HSE statistics show over 600,000 construction workers are exposed to silica dust each year, and over 1,000 people die annually from silicosis.
- Silica exposure can cause silicosis, lung cancer, COPD, kidney disease and rheumatoid arthritis.

#### The Legal Limit

- The Workplace Exposure Limit (WEL) for respirable crystalline silica is  $0.1 \text{ mg/m}^3$  over an 8-hour time weighted average.
- This is the maximum allowed after controls are in place. Dry cutting roof tiles can produce very high silica levels and is not acceptable.

#### CUT THE DUST— Capture | Contain | Control

##### CAPTURE (At Source)

- Always use water suppression when disc cutting
- Minimum water flow rate of approximately 0.5 litres per minute
- Check water jets are clear and ensure adequate supply

##### CONTAIN (Protect Others)

- Establish a dedicated cutting area on scaffolding
- Protect the scaffold boards
- Regularly clean the cutting area to prevent slips and trips
- Where possible, segregate other workers away from cutting area

##### CONTROL (Respiratory Protective Equipment (RPE) and Supervision)

- RPE is mandatory for tile cutting activities
- Minimum FFP3 disposable mask or half mask with P3 filter (APF 20)
- Face-fit testing required
- Wearers of tight-fitting RPE must be clean-shaven to ensure an effective, airtight seal.
- Disposable masks replaced each shift
- Powered respirators (TH2) required if adequate face fit cannot be achieved

#### Prevent First—Plan the Work

- Consider hand cutting where possible
- Use traditional methods of cutting tiles such as slate cutters, instead of a cut-off saw where suitable
- Set out tiles to reduce cutting requirements
- Consider specifying dry-valley systems

### Supervision and Monitoring

- Ensure water suppression systems are functioning
- Supervise correct RPE use
- Check scaffold condition and slip risks
- Consider health surveillance where exposure risk exists
- Provide training, information and worker engagement

### Key Site Rules

- ✗ No dry cutting roof tiles
- ✓ Always wet cut with correct flow rate
- ✓ Dedicated cutting zone
- ✓ FFP3 or P3 RPE minimum
- ✓ Face-fit tested and clean shaven
- ✓ Protect others from exposure

### Silica is not just dust

#### It is:

- As dangerous as asbestos
- Invisible
- Cumulative
- Preventable

**CUT THE DUST TODAY–  
SO YOU CAN BREATHE TOMORROW**

### Discussion Questions

- Has anyone seen other trades dry cutting without water suppression on site recently?
- When did you last check to see if the water flow was adequate?
- Who here has had face-fit testing?
- Where is the best place to set up a designated cutting area on this site?

This toolbox talk is aligned with NFRC HSGS05 'Controlling Silica When Disc Cutting Roof Tiles' and current HSE guidance on controlling respirable crystalline silica. All works must comply with COSHH Regulations and company risk assessments.

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