TOOLBOX TALK · RESPIRABLE DUST

Abrasive Blasting

About 8 minutes to deliver

Silica in the abrasive, silica in whatever you are blasting off, and a nozzle that will take a hand off at close range.

Abrasive blasting produces more airborne dust per hour than almost any other construction operation, and the dust is a mixture of two things: the abrasive, and whatever the abrasive just removed.

TWO SILICA HAZARDS, NOT ONE

- Silica sand as an abrasive is the obvious one and it is why it has largely been replaced. Steel grit, garnet, staurolite and slag alternatives exist for a reason.
- Silica in the substrate. Blasting concrete, brick, block or stone releases respirable crystalline silica regardless of how clean the abrasive is. 1926.1153 applies.

And a third possibility that changes the job entirely: old paint. Blasting a structure coated before 1978 means lead, and blasting anything older than the early 1980s means asbestos is a question that needs answering before the trigger is pulled.

CONTROLS

1926.57 requires that concentrations stay within the limits in 1926.55, and that ventilation, where used as the control, is designed and operated to that standard. In practice, on site:

- Containment. Screens, enclosures, or a blast cabinet where the work allows.
- Wet or vacuum-assisted blasting cuts the airborne fraction dramatically.
- Supplied-air respiratory protection with a blasting hood for the operator — an air-purifying respirator is not adequate for blasting, and the hood also protects the head, eyes and neck from rebound.
- The air supply must be breathing quality, with a CO monitor or alarm on an oil-lubricated compressor. Compressor exhaust reaching the intake has killed operators inside the hood.
- Everyone else out of the area, upwind, or in protection of their own. Bystanders are routinely the ones who get exposed.

THE NOZZLE

- A deadman control that stops the flow when released, tested at the start of every shift.
- Never point it at anyone. Blast media at operating pressure will strip skin and can inject into the body at close range.
- Bond and ground the nozzle — 1926.57(f)(2) requires it, because static builds on the abrasive stream and the dust in the air may be explosive.
- Depressurise before you break any connection, and check hoses and couplings for wear before use.

AFTERWARDS

Do not sweep and do not blow down with air. Wet methods or HEPA vacuum. And wash before eating — the dust that ends up on your hands is the dust that ends up inside you.

ASK THE CREW

- What are we blasting, and what is the coating on it?
- Is the operator on supplied air, and is the compressor intake somewhere clean?
- Who else is in the area, and are they upwind?

29 CFR 1926.57 · 29 CFR 1926.1153 · 29 CFR 1910.94

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ATTENDANCE RECORD

Abrasive Blasting

About 8 minutes to deliver · 29 CFR 1926.57 · 29 CFR 1926.1153 · 29 CFR 1910.94

Date _____ **Job / site** _____

Delivered by _____ **Company** _____

#	Print name	Signature	Date
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I delivered this talk and determined it was suitable for this crew and this work.

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