

JOB HAZARD ANALYSIS

Chipping & Drilling Concrete



Reference: OSHA Standard 29 CFR 1926.302, Subpart I, Tools Hand and Power

Job Description	Hazard Identification	Hazard Controls
<p>CHIPPING OR DRILLING CONCRETE</p> <p>USING A HAMMER DRILL</p>	<ul style="list-style-type: none"> • Falling/Flying Debris • Harmful Dust (Silica) • Tool Malfunction • Electric Shock • Loss of Control Over Tool • Vibratory Fatigue • Excessive Noise 	<ol style="list-style-type: none"> 1. Ensure work area is clear of other workers. 2. User shall wear a hard hat, eye protection, heavy duty or anti-vibratory gloves, and ear plugs. 3. Use dust-free power tools that are equipped with a vacuum; watering to keep down the dust; and have dust masks available for workers who might want to use one in addition to the other hazard controls. 4. Inspect and test drill and cord prior to use. 5. Make sure all manufacturer's protective devices (guards) are in place and operational. 6. Drill should be approved, double-insulated. If not, it should be properly grounded. 7. Plug into a GFCI-protected outlet. 8. Make sure that cords are not lying in water. 9. The drill operator should use any auxiliary handles that are on the drill to maintain control. 10. The drill operator should make sure that he sets his feet properly before beginning to drill or chip. 11. Use anti-vibratory gloves to relieve the impact on hands, when drilling for a prolonged period of time. 12. Take regular breaks from drilling or switch with another worker (if drilling for a prolonged period of time) to relieve vibratory fatigue.

Employee Instructions:
<ol style="list-style-type: none"> 1. Proper PPE must be worn at all times. 2. This JHA must be reviewed with all workers involved in the drilling/chipping operation, prior to start of the operation. 3. The attached Silica Hazard Tool Box Talk must be reviewed with all workers involved in the drilling/chipping operation, prior to the start of the operation.

All crew members must print/sign their name below to acknowledge their understanding of the JHA:

JHA conducted by: _____

Date conducted: _____

Manager / Supervisor Signature: _____

Date: _____

NOTE TO MANAGER, SUPERVISOR OR FOREMAN: WORK MUST NOT START UNTIL ALL HAZARDS ARE DISCUSSED; CONTROLS ARE IN PLACE; AND ALL SIGNATURES ARE OBTAINED.

TOOL BOX TALK - SILICA DUST

Many construction workers are exposed to silica dust in their work. Long-term exposure can result in silicosis – a lung disease that scars healthy lung tissue. A dry cough and shortness of breath mark early stages of silicosis. Advanced silicosis may cause death due to the inability to breathe or heart failure from the added strain of non-functioning lungs.

Silica dust is found in varying amounts of crushing, loading, hauling, and dumping of rock, concrete products, sand, gravel and mortar. Working with the dry ingredients (i.e. concrete or mortar powder) or using power equipment (i.e. drilling, coring, concrete saws, jack hammers, chippers, grinders and sanders) can release clouds of dust containing silica. Silica dust is very fine and may or may not be visible to the worker. The worker who is exposed to silica needs to be constantly aware of what he is doing and the potential for exposure. Infrequent and brief exposure to concrete dust usually is of little concern, but working regularly with equipment that generates silica dust, such as a concrete saw or grinder (for example) can place a worker in a high-risk category.

There is no cure for silicosis but **prevention** is relatively easy:

1. Pre-plan your work to reduce the producing, handling, cutting, grinding or stirring up of silica containing materials whenever possible.
2. When required to handle, cut, grind or stir-up silica-containing materials, wear a dust mask even if the dust being produced seems to be minimal.
3. Work in ways to decrease dust production. Use good housekeeping. For example, when sweeping up these materials, use short strokes that don't disperse the dust into the air (damp sweep when possible). When appropriate and safe, water can be and should be applied to the work surface to reduce the formation of dust such as drilling, grinding, and cutting.
4. Position power-tool operations downwind from the work area. Warn others who are working nearby (that may not be aware) that you are producing silica-containing dusts. Post signs where necessary to warn others to avoid the area.
5. Use adequate ventilation when working in enclosed areas to reduce generated dusts to below the established Permissible Exposure Levels (PEL).
6. Be familiar with the SDS sheets for materials you are working with, as handling procedures and respirator requirements vary. Some substances contain much more silica than others do. Always be sure you are adequately protected. Dusty conditions on a work-site can be controlled by adequate dust control measures such as watering or using tools that are equipped with attachments to capture the dust.

REMEMBER...THERE IS NO WAY TO CLEAN OUT PARTICULATES THAT HAVE FOUND THEIR WAY INTO YOUR LUNGS. ONCE THERE, THEY ARE THERE FOREVER.