



UNC
ENVIRONMENT,
HEALTH & SAFETY

Job Safety Analysis

Safety Information for The University of North Carolina at Chapel Hill

JOB SAFETY ANALYSIS TOPIC:

Using handheld power saw outdoors to cut masonry, concrete, stone or other silica-containing materials



Title	Work Task	Hazards	Controls
<p>Preplan the work</p>	<p>Comply with Table 1 of the OSHA Silica Construction Standard (1926.1153)</p> <p>Gather Proper PPE for the job and inspect it (N95 respirator*, hearing protection, safety glasses and safety shoes)</p> <p>Dress properly</p>	<p>Over exposure to silica</p> <p>Improper PPE inspection/selection</p> <p>Loose clothes, jewelry or long hair can be caught in moving parts.</p>	<p>Table 1 requires that saws are equipped with an integrated water delivery system that continuously feeds water to the blade.</p> <p>Improper PPE use and inspection can lead to unnecessary hazards created by wrong PPE or faulty PPE. *Use respirator with an APF of 10 (N95 or half face with P100 cartridges) if the task duration is more than four hours per shift.</p> <p>Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts.</p>

Before the job	Don necessary PPE	Improper Donning Eye Contact with debris Lacerations Hand Injury Over exposure to silica	Ensure all PPE is on correctly and passed inspection
	Check for misalignment or damage to the saw, grounding plug and cord.	Hand Injury Electrical shock	DO NOT use and TAG OUT saw if it is misaligned, the grounding plug is missing, or the cord is damaged.
	Ensure switch is in the off position before plugging in	Injury from accidental starting	Check switch position before plugging in saw
	Secure workpiece; if applicable	Injury from loss of control of workpiece	Secure workpiece with clamps or other appropriate manner
	Ensure work area is clean and well lit	Injury from items interfering with saw operation. Injury from unseen hazards.	Remove clutter and provide proper lighting prior to job
	Check blade to ensure it is sharp and clean	Injury from binding or loss of control during use	Replace blades that are dull. Clean dirty blades.
	Select proper blade for application	Injury from using improper blade for application	Refer to operator manual or manufacturer for correct blade selection
	Check that water hoses are securely connected and are not cracked or broken. Check operation of nozzles.	Over exposure to silica	Securely attach water hose or replace damaged hose. Adjust nozzles so that water goes to the blade and wets the cutting area.

	Restrict access to work area	Exposure to silica for pedestrian	Install barrier tape to restrict access for all projects. Due to respirator requirements for task duration greater than four hours, use barrier tape to restrict access to only employees who are engaged in the task. All employees engaged in the task must wear respirators.
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Using the saw			
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Using the saw	Be sure to only use the easy grip handle when handling saw	Loss of control of the power tool	Maintain firm grip on handle
	Keep proper footing and balance	Tripping/Falling	Do not overreach
	Adjusting tool or workpiece	Injury from contact with moving parts Injury from accidental startup	Do not lay the saw down until it has come to a complete stop. Unplug from power supply before adjusting.
	General cutting	Injury from using improper cutting method Injury from excessive vibration Over exposure to silica	Line the blade up with your cutting line. Grasp handle firmly and pull the trigger. Guide tool along cutting line. Stop work and adjust nozzles if there is an increase in visible dust

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Storage and Clean up	Properly cleanup work area.	Slips/trips/falls Over exposure to silica	Clean up any slurry produced before it dries using wet methods or with a wet vacuum equipped with a HEPA filter. Dispose of collected slurry into a plastic bag and place in a sealed container for disposal. If slurry dries, immediately wet it down and clean it up.
	Make sure the saw is clean and properly stored.	Improper Storage of Equipment/PPE	Clean dust and debris from tool with damp cloth. Only use mild soap to clean. Store the saw in the equipment cabinet or hang up in designated area.
Training	Employees must have hands on training in the proper use of this tool. Employees must take the online course 4570 Respirable Crystalline Silica Awareness	Supervisor is to fill out the 'Supervisor Led Training Form' and turn in the form to UNC-CH Environment, Health and Safety for documentation of proper training	
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