



Safe Operating Procedures

SOPs are designed to help employees identify hazards, limitations, PPE, & safety training for specific equipment/tasks.
Environmental Health and Safety, 414 J.M. Smith Hall

	Equipment/ Task Name	Angle Grinder
	Departments Impacted	Art & Architecture Department
	Purpose	An angle grinder, also known as a side grinder or disc grinder, is a handheld power tool used for grinding (abrasive cutting) and polishing. Angle grinders can be powered by an electric motor, petrol engine or compressed air. The motor drives a geared head at a right-angle on which is mounted an abrasive disc or a thinner cut-off disc, either of which can be replaced when worn.
TASK	HAZARDS	CONTROLS
1. Inspect work area.	Slip, trip, and fall hazard.	Check workspace, walkways and machine surrounds to ensure no slip/trip hazards are present.
2. Inspect angle grinder.	Electric shock hazard.	Visually inspect the cord to make sure it is in good condition.
	Hand laceration and abrasion.	<ul style="list-style-type: none"> Unplug grinder to check the condition and tightness off the grinding wheel and guard. Ensure appropriate guarding is in place on grinder.
3. Install and tighten grinding disc (if necessary).	Accidental starting and hand injury hazards.	<ul style="list-style-type: none"> Visually check to see if the drill is unplugged.
	Foot injury hazard.	<ul style="list-style-type: none"> Rest the tool on a flat surface to prevent it from dropping. Wear closed toed or safety shoes.
4. Prior to grinding items.	Projectile hazards.	<ul style="list-style-type: none"> Make sure the materials being ground are adequately secured and positioned correctly. Verify the work is adequately secured by trying to dislodge it with a gloved hand. Check the trigger switch to insure it is off prior to plugging in the grinder.
5. Hold grinder above material and turn on.	Loss of control and injury.	<ul style="list-style-type: none"> Never start grinder while resting on material. Always firmly hold grinder.
6. Begin grinding.	Projectile and eye injury hazards.	<ul style="list-style-type: none"> Wear safety glasses/goggles and/or a face shield to minimize hazards associated with flying objects and sparks.
	Entanglement, abrasion, and laceration hazards.	<ul style="list-style-type: none"> Keep fingers, hands, and cords away from grinding disc.



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		<ul style="list-style-type: none"> Wear leather gloves to protect the hands. Tie back hair and do not wear loose clothing or jewelry. 			
	Loss of control and bodily injury hazards.	<ul style="list-style-type: none"> Maintain a firm grip on the grinder. Allow grinding wheel to reach working speed before applying to work piece. Increase working loads gradually. Never abruptly. Use smooth fluid motions. Always keep the grinder moving across the material, never holding it in one place. 			
	Hearing loss hazard.	Wear ear plugs.			
	Inhalation of toxic, irritant fume, or particulate hazard.	Wear N95 or appropriate respirator.			
	Fire hazard.	Be aware of flying sparks and particulate. Aim debris away from self and other people as well as flammable materials.			
7. Turn off grinder.	Entanglement, loss of control, and bodily injury hazard.	<ul style="list-style-type: none"> Keep clear of grinder until it has stopped completely. Do not set grinder on table until it has completely stopped. 			
8. Clean grinder.	Accidental starting and hand injury hazards.	Ensure machines have been isolated from power sources before being cleaned, adjusted, maintained or repaired.			
9. Store grinder in appropriate location.	Equipment damage hazard.	<ul style="list-style-type: none"> Ensure disk is still in good condition before putting away. Store cord in such a way that it is not in contact with the grinding disc. Never carry any power tool by its cord. 			
10. Clean work area.	Slip, trip, and fall hazard.	<ul style="list-style-type: none"> Make sure the floor of the work area is free of cords, equipment, and debris. Clean up any spills or dust. Place equipment back in the storage area. 			
Required Training:		Required Personal Protective Equipment (PPE)			
1. Angle grinder training.		1. Safety glasses or face shield 2. Dust mask 3. Appropriate footwear (no open toed footwear) 4. Hearing protection 5. Leather gloves			
SOP ID	A011	Related Documents	Art Shop Manual	Creation/Revision Date	11/2018

Suggestions, questions, or comments? Please contact EH&S