

# Cal Poly

## Code of Safe Practice- Angle Grinder

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These following general rules shall be followed when operating an angle grinder while performing work on campus.

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Angle grinders are often used to grind pre-welded joints and remove unwanted fragments of metal or ceramics. They can also be used to cut stone, metal and concrete if fitted with the proper blades. The discs themselves rotate between 6000 and 15000 rpms, depending on the machine type and the disc diameter used.



The most common causes of injury to operators and nearby workers from angle grinders are lacerations from attachments that break and become projectiles, and lacerations from angle grinder kickbacks. These injuries typically result from the improper selection of tools, improper use or operation of the grinder, failure to utilize the correct personal protective equipment, improper abrasive/grinding wheel selection, and/or improperly inspected and maintained equipment.

Other potential hazards associated with the use of angle grinders including excessive noise and a potential source of ignition while grinding material.

### **General rules and guidelines for safe operation of an angle grinder:**

- Personal protective equipment (PPE) should be used when operating an angle grinder. Wear safety glasses, goggles, or a face shield with safety glasses or goggles, to protect against flying particles. Tight fitting leather gloves, aprons, steel-toed boots. Respiratory protection may be required, depending on the work. Hearing protection should be worn to protect against excessive noise.
- Keep bystanders away. **Everyone in the vicinity should wear safety glasses.**
- Do not wear loose clothing, scarves, hanging jewelry, or bracelets of any kind.
- Tie long hair back.
- Never operate the grinder without the wheel guard in place.
- Replace damaged guards because if an abrasive wheel breaks while rotating, it can cause a serious injury.
- Clean and service grinders according to manufacturers' recommendations. Record all maintenance for grinders.
- Ensure the floor around the work area is clean.
- Inspect the wheel for cracks and defects before you begin working.
- Do not use wheels that are cracked or those that excessively vibrate.
- Inspect the power cord for damage; repair or replace damaged cords prior to use.
- Do not operate grinder on wet floors.
- Use both hands when holding the grinder.
- Keep the power cord away from the grinding wheel and the material being ground.
- Use racks or hooks to store portable grinders.
- Stand away from the wheel when starting grinders. Warn co-workers to do the same.
- Allow grinder to come up to full speed before contacting work piece.
- Ensure that the mounting flange surfaces are clean and flat.

- Do not force wheels onto a grinder that is the wrong size or change mounting hole sizes.
- Do not tighten the mounting nut excessively.
- Use the mounting blotters supplied.
- Use the proper disk for the material being ground or cut.
- Store disks in a cool, dry place and honor the “best before date” if it is stamped on the disk.
- Run newly mounted wheels at operating speed for 1 minute before grinding.
- Avoid using grinders near flammable materials.
- Do not clamp portable grinders in a vise for grinding hand-held work.
- Do not use any liquid coolants with portable grinders.
- Do not place the grinder on the floor or working surface until the wheel has stopped turning.
- Do not keep any materials close to the grinding wheel when it is not in use.

*Code of Safe Practices are prepared by Cal Poly Environmental Health and Safety. Questions about this bulletin should be directed to extension 6665.*