

Hand & Portable Power Tools Safety

Safety Recommendations for Laboratories and Shops

Hand and power tools are essential in labs, shops, and everyday work, making tasks easier and more efficient. Despite their simplicity, these tools can pose serious risks if misused or poorly maintained. Paying careful attention to proper handling, inspection, and personal protective equipment helps prevent injuries and ensures a safe working environment for all users.

Hand & Power Tool Safety Recommendations

- Inspect cords, plugs, and housing for damage.
- Ensure guards and safety devices are installed.
- Check for cracks, loose parts, or defects.
- Verify tools are UL or NRTL certified.
- Remove defective tools from service.
- Use tools only for their intended purpose.
- Follow manufacturer instructions.
- Ensure users are trained before operation.
- Never remove or bypass safety guards.
- Disconnect power before changing blades or bits.
- Use double-insulated or grounded tools.
- Use GFCI protection in wet or damp locations.
- Do not daisy-chain extension cords.
- Use properly rated cords.
- Do not carry tools by cords.

Personal Protective Equipment (PPE)

- Safety glasses or goggles to protect eyes from debris or foreign particles.
- Gloves appropriate for the task (avoid near rotating equipment).
- Closed toe or safety shoes to protect feet.
- Hearing protection when noise levels are high.
- Respiratory protection when exposed to dust or fumes.

Note: PPE should not replace engineering or administrative controls.

Housekeeping Tips

- Keep floors clean and dry to prevent slips and falls.
- Store tools in designated areas after use.
- Do not leave tools in walkways or on elevated surfaces.
- Maintain an organized workspace with enough room to work safely.

Additional Resources:

[Makerspace and Shop Safety](#)

[Electrical Safety Guide – Division of Research & Safety](#)

[OSHA Hand and Power Tools](#)

[Choosing the Right Extension Cord](#) – W.W. Grainger