# Abrasive Wheel Tools

## Safety Meeting Packet


Abrasive wheel tools are used in many different industries for a variety of purposes. They may be hand-held, floor stand, or bench mounted. These tools pose different safety risks from other types of power tools. Most accidents involving abrasive wheels are due to an unsafe system of work or operator error. Taking the proper precautions can greatly reduce the hazards involved when using an abrasive wheel tool.

## Guards

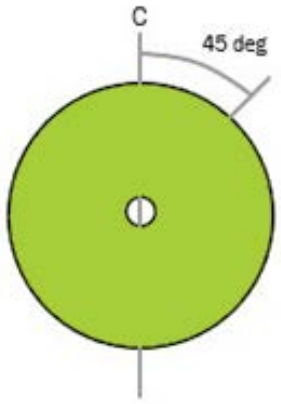
When using an abrasive wheel tool, ensure that the proper guarding is in place. The guards must:

- Cover the spindle end, nut, and flange projections
- Maintain proper alignment with the wheel
- Do not exceed the strength of the fastenings
- Guards must also limit user exposure to the wheel. Exposure recommendations vary by tool type.

| Exposure Recommendations | | |
|---|---|---|
| Tool Type | Maximum Exposure | Exposure Starting Point/Area |
| Bench / Floor Stand | 90 deg. | 65 deg. above horizontal plane of wheel spindle |
| Cylindrical | 180 deg. | 65 deg. Above horizontal plane of wheel spindle |
| Surface Grinder / Cutting Off Machine | 150 deg. | 15 deg. Below horizontal plane of wheel spindle |
| Swing Frame | 180 deg. | Top half of wheel must be enclosed |
| Automatic Snagging Machine | 180 deg. | Top half of wheel must be enclosed |
| Top Grinding | 60 deg. | Work is applied above horizontal centerline |

## Wheel Inspection

Abrasive wheels must be properly inspected before installation or use. A 'ring test' may be performed to ensure the wheel is free from defect. Tap a clean, dry wheel gently with a light non-metallic item as described below. The wheel should give a clear metallic tone or 'ring'. A wheel that sounds 'dead' must not be used as it may separate during operation.




To test a lighter wheel, suspend the wheel from a pin placed through the center hole and use the handle of a screwdriver to tap the wheel. For heavier wheels, use a wooden mallet and support the wheel on the floor. Tap approximately 1-2 inches from the edge of the wheel at a location 45 degrees from the centerline. Rotate the wheel 45 degrees and repeat the test.

## Wheel Mounting

When installing the wheel, ensure that it fits freely on the spindle and only tighten the spindle nut enough to hold the wheel in place. Double check that the tool's spindle speed does not exceed the maximum speed for the wheel being used.

Most abrasive wheels must be mounted between two flanges that are no less than one-third the diameter of the wheel. Flange specifications for certain wheel types and sizes along with flange exceptions can be found in 29 CFR 1910.215(c) (Abrasive Wheel Machinery Standard).

## Operation

When starting the tool, do not stand in the plane of wheel rotation as the machine starts up to avoid injury should the wheel break apart. Wait for the tool to reach its operating speed before grinding or cutting.

## Work Rests

When an offhand grinding machine is used, a work rest shall be in place to support the work. The rest must be rigid and adjustable to allow for repositioning as the wheel wears. The gap between the rest and wheel must be no greater than 1/8 of an inch to avoid material becoming jammed between the wheel and rest. Never adjust a work rest while the wheel is in motion.

## General Precautions

When using an abrasive wheel tool, remember:

- Always use eye or face protection, as there may be flying debris.
- Make sure the tool is powered down when not in use.
- If using a hand-held abrasive wheel tool, never clamp it into a vise.

For additional information regarding abrasive wheel tools, please consult the following:

- OSHA Standard: 29 CFR 1910.215 - Abrasive Wheel Machinery
- OSHA Standard: 29 CFR 1910.243(c) - Portable Abrasive Wheels
- OSHA Standard: 29 CFR 1926.300(b)(7) through (9) – Tools - Hand and Power - Guarding
- OSHA Standard: 29 CFR 1926.303 - Abrasive wheels and tools

# Abrasive Wheel Tools

## Safety Meeting Attendance Acknowledgement

Company Name _____

Department / Division _____

Meeting Date & Time _____ _____ ☐ AM ☐ PM

Meeting Location _____

Name & Title of Individual Conducting Meeting _____

## Key Meeting Discussion Points / Important Reminders:

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## Internal Procedures Reviewed:

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**By signing this document, you confirm your attendance at the meeting and acknowledge the issues addressed above!**

| Employees in Attendance | | |
|---|---|---|
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Employees Not Present: _____

Suggestions/Recommendations to Improve Workplace Safety and Health: _____

Actions Taken: _____

Manager/Supervisor: _____ Date: _____

## Disclaimer:

The information provided above was assembled using multiple resources. However, these materials do not contain ALL the information available regarding the required safety standards under local, provincial, state, or federal law for your industry.