

# SAFETY INFORMATION

Deliver this insert to operator. Keep for reference.

## 3M™ Flexible Grinding Wheels, Depressed Center Grinding Wheels, Cutting and Grinding Wheels



**Read this insert before mounting or using product.** Follow tool's instructions, employer's safety rules, ANSI B7.1 re: Depressed Center Grinding Wheels, and any other local standards. Operator must be properly trained.



### **WARNING**

Improper operation can cause serious injury or death to operators and bystanders. If a wheel breaks, fragments can fly off with deadly force. Sparks, heat, and dust generated while grinding can create fire, explosion, or health hazards.

### Planning and Preparation

#### Prepare a safe work area

##### Check workpiece materials

Use only on Carbon Steel, Stainless Steel, Cast Iron, or Alloys of: Titanium, Copper, Zinc, Chromium/Nickel, or Aluminum to reduce the risk of wheel breaking, fire, explosion, or health hazards.

Read the Safety Data Sheets (SDS) for the workpiece materials.



##### Respiratory hazard

Exposure to dust generated from workpiece and/or abrasive materials can result in serious, permanent lung damage or other injury. To reduce this risk:

- Use dust capture or local exhaust as appropriate.
- Wear all recommended protective equipment.



##### Fire and explosion hazard

Grinding produces sparks and heat. Keep away from anything that can ignite or explode. Do not allow dust to accumulate.



##### Do not allow bystanders

Keep bystanders out of the work area. Broken wheel fragments can be thrown a long distance, and bystanders may also be exposed to respiratory, fire, and explosion hazards. If other people must be nearby, ensure that they wear proper personal protective equipment (PPE).

#### Wear proper personal protective equipment

Always wear proper PPE as identified by your risk assessment to help protect against dust, grinding sparks and debris, noise, and some wheel fragments:



- full face shield



- impact resistant protective eyewear marked as ANSI Z87.1 conformant
- hearing protection
- NIOSH approved respirator



- gloves



- body and skin protection



- foot protection

Even with PPE, broken wheel fragments can cause serious injury or death. Follow safe operating procedures to reduce the risk of injury from wheel breakage.

### Safe Operating Procedures

#### Broken wheel hazard

Follow these precautions to reduce the risk of injury or death from a wheel breaking.



##### Tool selection:

1. Use only on tools designed for grinding wheels.
2. Check tool RPM rating. **Never use a tool that runs faster than the Max. RPM of the wheel.** Exceeding the wheel's Max. RPM can cause it to break apart.
3. Use only with proper guard. The guard helps direct fragments away from you if the wheel breaks.
4. Use only with flanges which are clean, matching, and at least one-third the wheel diameter.



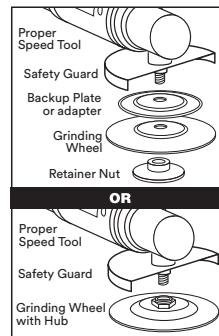
##### Mounting:

1. Inspect the wheel. Never use damaged wheels. Replace if damaged (e.g., cracks or chips).
2. Follow tool manufacturer's mounting instructions.
3. Never force wheel onto tool spindle or alter wheel center hole size. Do not alter wheel in any way.
4. Use correct attachment system. Tighten nut only enough to firmly hold wheel. Ensure full 3 thread contact with spindle.



##### Operation:

1. Direct wheel away from your body and bring it up to operating speed before grinding.
2. If vibration or wobbling occurs, stop immediately. Determine the cause and correct before continuing. Vibration or wobbling can be caused by:
  - Forcing a wheel onto a spindle that is too large.
  - Over-tightening the mounting nut.
  - Improperly mounted wheel.
  - A damaged center hole.
3. Follow good grinding practices:
  - Secure workpiece.
  - Keep all body parts and objects clear of grinding path.
  - Grind with product at least 30 degrees from workpiece.
  - Begin grinding by gradually engaging workpiece
  - Never bump or force wheel so that tool motor slows or stalls.
  - Direct sparks away from face and body.
  - Type 28 Wheels shall not be used for cutting-off or notching operations.\*



**Storage:** Protect wheel when not in use. Never rest tool on wheel. Store wheels in dry environment above 32°F (0°C).

See [www.3M.com/abrasives-safety](http://www.3M.com/abrasives-safety) for additional safety information and video.

\*See ANSI standard B7.1.

For other 3M Product Information call: 800-3M HELPS (800-364-3577) toll free or 651-737-6501 direct dial

3M Abrasive Systems

[www.3M.com/abrasives](http://www.3M.com/abrasives)

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