

## THE DO'S AND DON'TS FOR PORTABLE ABRASIVE CUP WHEELS

Portable resin bonded abrasive cup wheels (straight Type 6 and tapered Type 11) have been excellent grinding tools since the late 1930's. These wheels are very safe when used correctly.

However, accidents have occurred because of misuse and abuse of this product. Avoiding accidents begins with learning and following the basic Do's and Don'ts for portable abrasive cup wheels listed below.

### Do's

- Do check all wheels for cracks or damage before use.
- Do check machine speed against established safe operating speed marked on the wheel.
- Do mount wheel on machine with speed at or below the wheel's rated speed.
- Do mount portable cup wheels only on grinders with proper retractable band-type (skirt) cup guards.
- Do mount threaded cup wheel with a proper backup flange of at least 1/3 the wheel's diameter.
- To adjust proper cup guard so that it is between the operator and the wheel. Set the "skirt" guard to within 1/8 inch of the cup wheel's rim (grinding surface).
- Do run wheel in protected area for one minute before grinding.
- Do clamp or secure all work-pieces before grinding.
- Do grind only on a cup wheel's rim.
- Do avoid bumping or striking the wheel onto any surface. Hard impacts can damage the wheel and cause it to break.
- Do feed the wheel into the work-piece at an even speed. Attempting to grind too fast will cause excessive strain on the wheel and may result in breakage.
- Do grind only materials designed for the cup wheel (e.g. metal, masonry, etc.).
- Do stop grinding and investigate any unusual sounds, vibrations, or anything that appears abnormal.
- Do keep hands and other body parts clear of the grinding wheel and spark stream.
- Do maintain your tools as if your life depends on it.
- Do replace damaged wheel guards.
- Do always handle and store grinding wheels in a careful manner.
- Do wear proper personal protection such as eye and face protection, apron, gloves, safety shoes, hearing protection, etc.
- Do shield bystanders and any flammable materials from the spark stream (shower).
- Do follow any symbols and warnings located on the wheel.

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- Do review all applicable MSDS (Material Safety Data Sheets) before using a cup wheel.
  - Do comply with ANSI B7.1, OSHA and all safety materials provided with the wheels and the tools.

- Do visit the abrasive manufacturer's website for additional safety information.
- Do contact your abrasive manufacturer if you have any safety questions.

### **Don'ts**

- Don't use cup wheels on unguarded angle grinders or any machine that is not designed and marked for cup wheels.
- Don't exceed the speed marked on the cup wheel.
- Don't use spacers, washers, or hex nuts behind cup wheels. These items may aid in the removal of the wheel, but can lead to wheel breakages.
- Don't "hang" the wheel below the cup guard.
- Don't use Type 27 (depressed center) or Type 28 (saucer-shaped) wheel guards with cup wheels because they are too shallow to offer full protection.
- Don't remove the "skirt" or bottom of the cup guard.
- Don't alter a cup wheel. If the cup wheel does not fit on the tool, then get the correct tool or wheel.
- Don't use wheels that have been dropped or otherwise damaged.
- Don't use excessive downward pressure while grinding.
- Don't use on any machine NOT equipped with the proper cup guard.
- Don't grind wood or other non-approved materials with an abrasive cup wheel.
- Don't create a fire hazard. Shield any nearby flammable materials to prevent ignition from the spark stream (shower) or from latent sparks.
- Don't jam the wheel into the work.
- Don't allow the wheel to "load up" with the material you are grinding.
- Don't grind on the side of a cup wheel.
- Don't strike the cup wheel onto the work-piece or any item as it may become damaged or break.
- Don't use this wheel if you have not reviewed all of the safety materials and have not been properly trained in the use of the tool and wheel.