

### How abrasives work

Husqvarna abrasive products are available in a variety of shapes, sizes and specifications for a wide range of cutting, grinding and finishing applications.

#### What is an abrasive wheel?

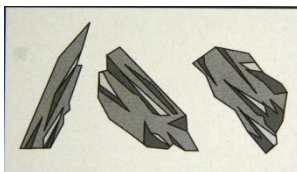
A bonded abrasive wheel is a self-sharpening grinding (or cutting) tool composed of hard abrasive grains held together by a bonding material.

#### Abrasive grain types

Aluminum oxide is a tough, wedge-shaped, man-made ceramic powder used for cutting or grinding metal, carbon steel, alloys, bronze and similar materials.



Silicon carbide is a hard, sharp, man-made ceramic powder used for cutting or grinding concrete, masonry, stone and similar materials.



#### Bonding Material

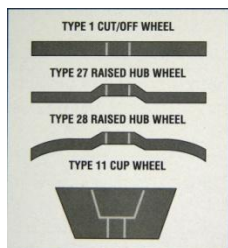
The bond in most Husqvarna abrasives is a synthetic resin which holds the wheel together and supports the exposed surface grains.

#### Reinforcing Material

Woven fiberglass cloth reinforcing provides added strength and flexibility. One or more layers of reinforcing are used, depending on the application.

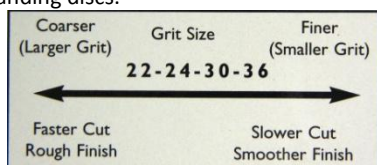
#### Wheel Types

Wheel types are identified with a numeric code in the specifications.



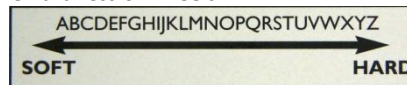
#### Grit Sizes

Abrasive grain grit sizes are included in the specifications for Husqvarna raised hub wheels, cup wheels, grinding stones and fiber sanding discs.



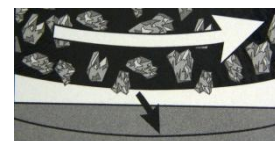
### Bond Hardness

The hardness of an abrasive wheel represents the bond strength of the wheel and the wheel's ability to hold on to abrasive grains under cutting or grinding loads. Standard abrasive industry classifications use letter codes to indicate the relative hardness of wheels.



#### How do abrasives work?

As the wheel contacts the material, exposed surface grains grind away small chips of the material.



As the wheel grinds, the material causes the surface grains to fracture, exposing new, sharp cutting points.



The material also wears away the bond between the grains.

Eventually the surface grains are used up. The old grains are released as the bond wears away, and new grains are exposed.



Maximum Operating Speeds for Abrasive Wheels				
Maximum RPM's				
Blade Diameter	Type 1 Reinforced Cut-Off Wheels	High Speed Blades	Type 27 & 28 Wheels	Type 11 Cup Wheels
4"	19,000	-	15,000	9,050
4-1/2"	13,300	-	13,300	-
5"	12,000	-	12,000	7,255
6"	10,000	-	10,000	6,050
7"	8,600	-	8,600	-
8"	7,500	-	-	-
9"	6,800	6,800	6,800	-
10"	6,110	-	-	-
12"	5,095	6,300	-	-
14"	4,365	5,400	-	-
16"	3,820	4,500	-	-
18"	3,395	-	-	-