

### Unitized Characteristics

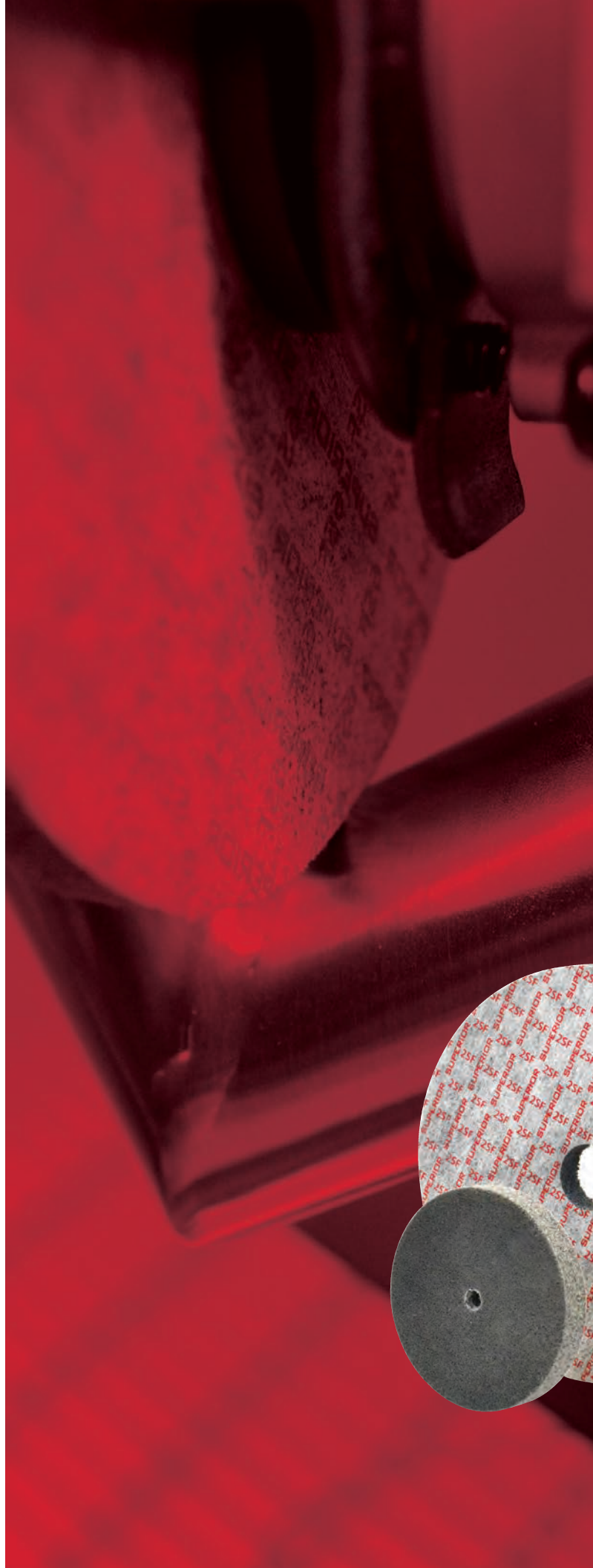
The layered, non-directional construction of SHUR-BRITE® Unitized Wheels and Discs ensures continual exposure of abrasive grains during surface preparation, cleaning, blending and polishing operations. A variety of sizes and grades are available for use with intricate components to larger workpieces. Due to the conforming nature of unitized materials, surface requirements can be achieved without affecting workpiece tolerances, and with minimal heat buildup.

### Unitized Features

- ▶ Continual exposure of cutting grains & consistent finishing ability throughout extended product life
- ▶ Quality nylon fiber with high (+500°F) melting point
- ▶ Smear & heat resistant to reduce risk of discoloration
- ▶ Can be used with oils & lubricants to further reduce heat or smearing
- ▶ Free of contaminants and metallic ingredients

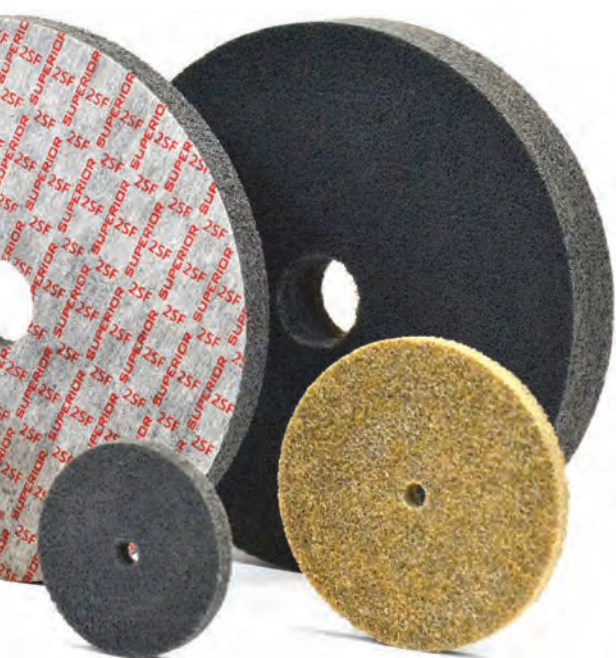
### Applications

- ▶ General purpose cleaning prior to painting
- ▶ Rust, coating, scale & oxidation removal
- ▶ Edge breaking or radiusing
- ▶ Restoration polishing of molds & dies
- ▶ Deburring gears, wing spars or edge of turbine blades
- ▶ Surface refinement of airfoils, turbines & vanes
- ▶ Polishing fillet areas on turbines & aircraft parts
- ▶ Cleaning or removing micro-burrs on gears & threads
- ▶ Polishing or finishing surgical instruments or implants



Layered sheets of nonwoven abrasives are compressed in resins, forming a dense slab, from which smaller diameter wheels are produced. The density of unitized wheels allows controlled cutting, cleaning and polishing action for tighter tolerances.

► Understanding Material Grades		
Wheel Density	Wheel density also translates to flexibility and conformity. Lower densities will not alter workpiece geometry, whereas higher densities will work and remove material faster.	<div> <div>2</div> <div>8</div> </div> <div> <div>Softer, more conformable</div> <div>Harder, more durable</div> </div> <div> <div>Masking/Finishing</div> <div>Light Deburring/ Cleaning/Finishing</div> <div>Heavy Deburring</div> </div>
Grain Type	Aluminum oxide grains are denser, allowing higher pressure, and recommended for softer ferrous or non-ferrous materials. Silicon carbide grains are harder and sharper, yet brittle and used with lighter pressure on harder materials, like stainless or titanium.	<div> <div>A</div> <div>S</div> </div> <div> <div>Durable, long lasting</div> <div>Sharper, finer scratch pattern</div> </div> <div> <div>Aluminum Oxide</div> <div>Silicon Carbide</div> </div>
Grain Size	The abrasive grain size used in each wheel controls the depth and refinement of the scratch. Due to the nonwoven construction, unitized products will usually finish 2-3 grits finer than the grain size.	<div> <div>Coarse (60-80)</div> <div>Medium (100-150)</div> <div>Fine (180-220)</div> </div> <div> <div>Faster cut, rougher finish</div> <div>Reduced cut rate, finer finish</div> </div>



► Performance	2	4	6	8
Cut	○	○	●	●
Life	○	○	●	●
Finish	●	●	○	○
Flexibility	●	●	○	○
Pressure	○	○	●	●
Density	○	○	●	●

● Best    ◐ Better    ○ Good

[www.superiorabrasives.com](http://www.superiorabrasives.com)

# SHUR-BRITE® Unitized

## SHANK MOUNTED UNITIZED WHEELS

Reach small and intricate areas to safely deburr, clean or polish without damaging parts. Compressed nonwoven material will conform to contours and acute angles and not alter part geometry.

- ▶ Easily navigate intricate parts
- ▶ Light deburring in narrow areas
- ▶ Clean or finish small, TIG welded parts or seams
- ▶ No mandrels or adapters required



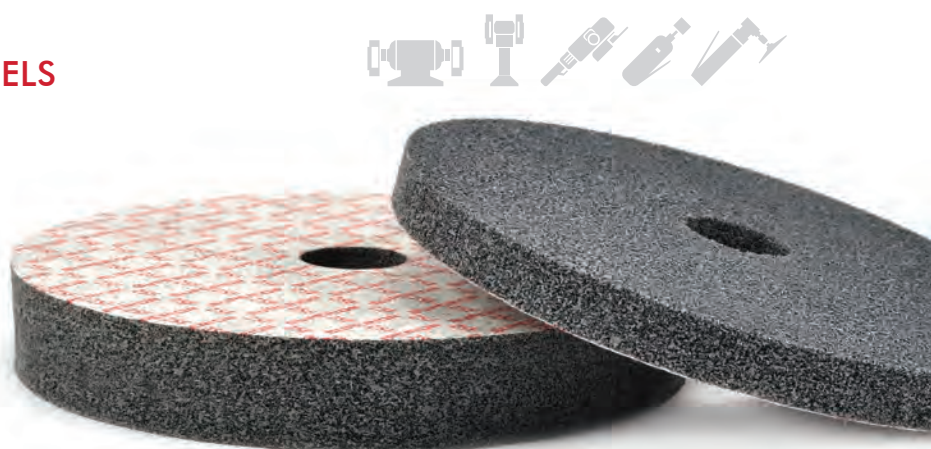
Diameter	Thickness	Shank	Max RPM by Density		Optimal RPM	Std. Pkg.	2SF	4SF	6AM	8AC
			2	4-8						
1"	1/8"	1/8"	30,100	35,100	10,500	10	<b>54697</b>	<b>54826</b>	<b>54698</b>	<b>54699</b>
1"	1/4"	1/8"	30,100	35,100	10,500	10	<b>54700</b>	<b>54785</b>	<b>54701</b>	<b>54702</b>
1-1/2"	1/4"	1/4"	30,100	35,100	7,200	10	<b>54703</b>	<b>54835</b>	<b>54704</b>	<b>54705</b>
2"	1/4"	1/4"	16,100	22,100	6,400	10	<b>54710</b>	<b>54831</b>	<b>54714</b>	<b>54716</b>
3"	1/4"	1/4"	15,100	18,100	6,400	10	<b>54718</b>	<b>54829</b>	<b>54725</b>	<b>54727</b>

● Ferrous ● Non-Ferrous ● Stainless ● Exotic Alloys ● Plastics ○ Composites

## ARBOR MOUNTED UNITIZED WHEELS

Conforming structure cuts consistently throughout wheel life without heat buildup, extending life on soft and exotic alloys. Nonwoven structure will not disrupt critical part tolerances while cleaning or removing residue, finishing or polishing.

- ▶ Consistent cut life and heat tolerance
- ▶ Finish turbine blades and aerospace parts
- ▶ Remove machining marks or process traces



Diameter	Thickness	Arbor	Max RPM by Density		Optimal RPM	Std. Pkg.	2SF	2AM	4SF	6SF	6AM	8AM	8AC
			2	4-8									
1"	1/8"	1/8"	30,100	35,100	10,500	10	<b>54652</b>	-	<b>54825</b>	-	<b>54653</b>	-	<b>54654</b>
1"	1/4"	1/8"	30,100	35,100	10,500	10	<b>54655</b>	-	<b>54784</b>	-	<b>54656</b>	-	<b>54657</b>
1"	1"	3/16"		35,100	10,500	10	-	-	-	<b>54658</b>	<b>54659</b>	-	<b>54660</b>
1-1/2"	1/4"	1/4"	20,100	30,100	7,200	10	<b>54661</b>	-	<b>54836</b>	-	<b>54662</b>	-	<b>54663</b>
2"	1/4"	1/4"	16,100	22,100	6,400	10	<b>54664</b>	-	<b>54832</b>	-	<b>54665</b>	-	<b>54666</b>
3"	1/4"	1/4"	15,100	18,100	6,400	10	<b>54667</b>	<b>54668</b>	<b>54830</b>	-	<b>54670</b>	<b>54669</b>	<b>54671</b>
3"	1/2"	1/4"	15,100	18,100	6,400	10	<b>54672</b>	-	-	-	<b>54673</b>	-	-
4"	1/4"	1/4"		8,500	4,800	10	<b>54674</b>	-	-	-	-	-	-
6"	1/2"	1"		5,000	3,200	4	<b>54675</b>	-	-	-	-	-	-
6"	1"	1"		5,000	3,200	2	<b>54676</b>	-	-	-	-	-	-

● Ferrous ● Non-Ferrous ● Stainless ● Exotic Alloys ● Plastics ○ Composites





## QUICK CHANGE UNITIZED DISCS

Quick change button allows fast changeover between grades and applies additional pressure and support. Non-directional structure allows discs to be used flat or on edge, for multiple contours or part geometries.

- ▶ Finish contoured orthoses and surgical devices
- ▶ Small parts deburring or flash removal
- ▶ Remove overspray or adhesives without damage
- ▶ Finish aerospace parts and turbine blades



Type	Diameter	Thickness	Max RPM by Density		Optimal RPM	Std. Pkg.	2SF	4SF	6AM	8AC
			2	4-8						
Type R	2"	1/4"	16,100	22,100	9,500	10	<b>54709</b>	<b>54872</b>	<b>54713</b>	<b>54715</b>
	3"	1/4"	15,100	18,100	6,400	10	<b>54717</b>	<b>54873</b>	<b>54723</b>	<b>54726</b>

● Ferrous ● Non-Ferrous ● Stainless ● Exotic Alloys ● Plastics ○ Composites



STOCK ITEMS IN **RED** | Additional Items Available

● Best ○ Better ○ Good

[www.superiorabrasives.com](http://www.superiorabrasives.com)

# SHUR-BRITE® Unitized

## FINAL POLISHING UNITIZED WHEELS

A soft density and very fine abrasive grain are used to produce a high luster on stainless steel and mirror finishes on a variety of metals. Able to conform easily, multiple shapes and contours can be finished or polished to final requirements.

- ▶ Soft density will not alter surface tolerances
- ▶ Easily conforms to multiple dimensions
- ▶ Very fine grains produce sharp, reflective cuts
- ▶ Can be used with compounds for fine polishing



Diameter	Thickness	Arbor	Max RPM	Optimal RPM	Std. Pkg.	2SVF
1"	1"	3/16"	30,100	10,500	10	<b>45102</b>
2"	1/4"	1/4"	16,100	6,400	10	45103
2"	1/2"	1/4"	15,100	6,400	10	45104
3"	1/4"	1/4"	15,100	6,400	10	<b>45105</b>
3"	1/2"	1/4"	15,100	6,400	10	45106

● Ferrous ● Non-Ferrous ● Stainless ○ Exotic Alloys ○ Plastics ○ Composites

### ▶ Superior Support

Use 1" x 1" plug wheels with Quick Change Wheel Mandrels (p.69).



## QUICK CHANGE FINAL POLISHING DISCS

Specifically designed to polish smaller surface areas, quick change button allows fast changeover and applies additional pressure and support with rubber backing pad. Discs can be used flat or on edge, for multiple contours or part geometries.

- ▶ Will not alter part geometry or critical tolerances
- ▶ Small parts finishing and polishing
- ▶ Easily controllable operation and applied finesse
- ▶ Blend, finish or polish small spot welds with surrounding surface



Type	Diameter	Thickness	Max RPM	Optimal RPM	Std. Pkg.	2SVF
Type R	2"	1/4"	16,100	9,500	10	<b>45618</b>
	3"	1/4"	15,100	6,400	10	<b>45620</b>

● Ferrous ● Non-Ferrous ● Stainless ○ Exotic Alloys ○ Plastics ○ Composites



## DEPRESSED CENTER FINAL POLISHING DISCS

Quickly produce a high luster or mirror finish with a greater wheel contact area. For use on large, flat surfaces or subtle contours with controlled pressure from fiberglass reinforced backing plate.

- ▶ Reinforced leverage with cushioned control
- ▶ Finish larger areas without operator or tooling fatigue
- ▶ Contour large inner or outer diameters

### ▶ Superior Support

Unitized products are run significantly slower than their coated counterparts. The use of variable speed grinders optimizes performance. For optimum polishing, try cutting RPM in half.

Diameter	Arbor	Max RPM	Optimal RPM	Std. Pkg.	4SVF
4-1/2"	7/8"	11,000	6,000	1	<b>45107</b>

● Ferrous ● Non-Ferrous ● Stainless ○ Exotic Alloys ○ Plastics ○ Composites



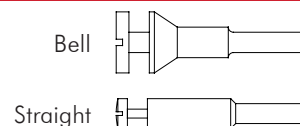
## SCREW LOCK TYPE WHEEL ADAPTERS

Easy to access slotted screw secures wheel in place, providing a reduced adapter profile. Available in various lengths, with shank diameters from 1/8" to 3/8" for multiple tools.

- ▶ Easy product changeover with basic tools
- ▶ Available for a variety of wheel dimensions
- ▶ Long lasting, rust proof finish



### ▶ Superior Support



Wheel Arbor Hole	Wheel Thickness	Shank Diameter	Head Style	Head Diameter	Overall Length	Max RPM	Std. Pkg.	Part #
1/4"	Up to 1/4"	1/4"	Bell	3/4"	2"	28,000	1	<b>12213</b>
3/8"	Up to 1/4"	1/4"	Bell	3/4"	2"	28,000	1	<b>12214</b>
1/4" or 3/8"	Up to 1/4"	1/4"	Bell	3/4"	2"	28,000	1	<b>26222</b>
1/4"	Up to 1/2"	1/4"	Bell	3/4"	2-1/2"	28,000	1	<b>35733</b>
1/4"	Up to 1"	1/4"	Bell	3/4"	2-1/2"	28,000	1	35734
1/16"	Up to 1/4"	1/8"	Straight	3/16"	1-3/4"	28,000	1	<b>12220</b>
1/8"	Up to 3/16"	1/8"	Straight	1/4"	1-1/2"	28,000	1	<b>12221</b>
1/8"	Up to 1/4"	1/4"	Straight	3/8"	2"	28,000	1	<b>12222</b>
1/4"	Up to 1/4"	1/4"	Straight	7/16"	2"	28,000	1	<b>12223</b>
1/8"	Up to 1/4"	1/4"	Straight	3/8"	3"	28,000	1	<b>12224</b>
1/4"	Up to 1/4"	1/4"	Straight	7/16"	3"	28,000	1	<b>12225</b>

## CHUCK TYPE WHEEL MANDRELS

Available for both 1/4" or 3/8" arbor holes and up to 3/8" wheel thickness. Washer and slotted screw secure wheels firmly in place.

- ▶ Remove washer and wheel with basic tools
- ▶ Long lasting, rust proof finish



Wheel Arbor Hole	Wheel Thickness	Shank Diameter	Flange Diameter	Overall Length	Max RPM	Std. Pkg.	Part #
1/4"	1/4" to 3/8"	1/4"	9/16"	2-1/8"	28,000	1	<b>12211</b>
3/8"	1/4" to 3/8"	1/4"	11/16"	2-1/8"	28,000	1	<b>12212</b>

## NUT LOCK WHEEL ADAPTERS

Recommended for wheels used on edge. Large washer provides additional stability on larger diameter wheels. Fits wheels up to 3/4" thick.

- ▶ Remove wheel with basic wrench
- ▶ Machine flanged washer for extra stability



Wheel Arbor Hole	Wheel Thickness	Shank Diameter	Washer Diameter	Overall Length	Max RPM	Std. Pkg.	Part #
1/4"	Up to 5/8"	1/4"	1"	2-1/2"	28,000	1	<b>10540</b>
3/8"	Up to 3/4"	1/4"	1"	2-1/2"	28,000	1	<b>12215</b>

## QUICK CHANGE WHEEL MANDRELS

Quick changeover, screw in mandrel for plug wheels. Coarse threads secure wheel in place without additional tooling.

- ▶ Quick changeover without tooling
- ▶ Rust proof, black oxide finish



Wheel Arbor Hole	Wheel Thickness	Shank Diameter	Shoulder Diameter	Overall Length	Max RPM	Std. Pkg.	Part #
3/16"	1"	1/4"	1/2"	1-3/4"	28,000	1	<b>37519</b>

## ARBOR REDUCER BUSHINGS



Retrofit existing tooling to accept wheels with 1" arbor.



Arbor Diameter	Reduced Diameter	Std. Pkg.	Part #
1"	3/4"	1 Pair	10391
1"	5/8"	1 Pair	<b>10392</b>
1"	1/2"	1 Pair	<b>10393</b>

## QUICK CHANGE DISC HOLDERS

Quick change rubber backing pad provides stability and flexibility under directional pressure.



Type	Diameter	Shank	Max RPM	Std. Pkg.	Part #
Type R	2"	1/4"	30,000	1	<b>11275</b>
	3"	1/4"	20,000	1	<b>11276</b>