



Baldor Buffing and Polishing Basics

Buffing is the transforming of a rough or oxidized surface into a smooth, high-gloss surface. This process is done by using an electric buffer, a buffing wheel and compounds to smooth the surface. This is very similar to using wet and dry sandpaper when smoothing a metal surface. But buffing is much faster -- instead of using elbow grease, as with sandpaper, you utilize the horsepower and speed of the buffer, in conjunction with a buffing wheel and buffing compounds.

Buffing compounds contain wax-based substances which have different abrasive powders added to them. These abrasive powders vary in grit size and type. The result is different buffing compounds for different applications with faster or slower cutting rates.

Buffing wheels are available in different styles for faster or slower cutting. Each has a flat surface, known as the "edge", which absorbs the compound. When compound is held against the "edge" of the rotating buffing wheel, the heat from the friction melts the wax; and the abrasive powder adheres to this "edge". This thin layer of abrasive (compound) cuts and smooths your workpiece while polishing the surface.

There are three stages in the buffing process - coarse, medium and fine. Each stage involves using various styles of buffing wheels and different types of compounds for the material to be buffed and the finish to be achieved. Depending on the buffing job, you will need to determine which compound and buff wheel you are going to use first, then step down through the buffing stages until you are satisfied with the results. The following guides will help you select buffing wheels and compounds.

| Material to be buffed | Cloth Covered Sisal Wheel | | Ventilated Yellow Wheel | | | Compressed Wheel | | | Spiral Sewn Wheel | | | Ventilated White Wheel | | | Radial Arc Wheel | | | Loose & Canton Flannel Wheels | | |
|---|---------------------------|-----|-------------------------|---------------|-----|------------------|---------------|-----|-------------------|---------------|-----|------------------------|---------------|-----|------------------|---------------|-----|-------------------------------|--|---|
| | BUFFING STAGE | | | BUFFING STAGE | | | BUFFING STAGE | | | BUFFING STAGE | | | BUFFING STAGE | | | BUFFING STAGE | | | | |
| | Coarse | Med | Fine | Coarse | Med | Fine | Coarse | Med | Fine | Coarse | Med | Fine | Coarse | Med | Fine | Coarse | Med | Fine | | |
| HARD METALS Steel, Iron, Stainless | ✓ | | | ✓ | ✓ | | | ✓ | | | | ✓ | ✓ | | | ✓ | ✓ | | | ✓ |
| SOFT METALS Copper, Brass, Bronze, Zinc, Pot Metal & Aluminum | ✓ | | | ✓ | ✓ | | | ✓ | | | ✓ | | ✓ | ✓ | | ✓ | ✓ | | | ✓ |
| PLATED MATL'S Nickel & Chrome | | | | | | | | ✓ | | | ✓ | | ✓ | ✓ | | ✓ | ✓ | | | ✓ |
| PLATED & SOLID Silver, Gold, Pewter | | | | | | | | | | | | ✓ | ✓ | | ✓ | ✓ | | | | ✓ |
| PLASTICS Acrylics, Lucite, Plexiglass | | | | | | | | ✓ | | | ✓ | | | | ✓ | | | | | ✓ |

| Material to be buffed | Jeweler's Rouge (Red) | | | Emery (Black) | | | White Rouge (White) | | | Plastic (Blue) | | | Tripoli (Brown) | | | Stainless (White) | | |
|---|-----------------------|-----|------|---------------|-----|------|---------------------|-----|------|----------------|-----|------|-----------------|-----|------|-------------------|-----|------|
| | BUFFING STAGE | | | BUFFING STAGE | | | BUFFING STAGE | | | BUFFING STAGE | | | BUFFING STAGE | | | BUFFING STAGE | | |
| | Coarse | Med | Fine | Coarse | Med | Fine | Coarse | Med | Fine | Coarse | Med | Fine | Coarse | Med | Fine | Coarse | Med | Fine |
| HARD METALS Steel, Iron, Stainless | | | | ✓ | | | | ✓ | ✓ | | | | | | | ✓ | | |
| SOFT METALS Copper, Brass, Bronze, Zinc, Pot Metal & Aluminum | | | | ✓ | | | | | ✓ | | | | | ✓ | | | | |
| PLATED MATL'S Nickel & Chrome | | | | | | | | | ✓ | | | | | ✓ | | | | ✓ |
| PLATED & SOLID Silver, Gold, Pewter | | | ✓ | | | | | | | | | | | ✓ | | | | |
| PLASTICS Acrylics, Lucite, Plexiglass | | | | | | | | ✓ | | | | | ✓ | | | | | |

3 BUFFING STAGES - Stage 1. COARSE - Rough cutting removes scratches, burrs, nicks, scuffs, rust, erosion, weld blemishes, tool & die marks or ripples. **Stage 2. MEDIUM** - Medium cutting removes oxidation, minor scratches, blemishes, scuffs and provides an initial polish to the surface. **Stage 3. FINE** - Final polish removes fine scratches and produces a high-luster finish.