

Buff & Polish Chart

Source: Covington Catalog

INTRODUCTION

Many stones polish equally well with several buff and polishing compound combinations. A very hard gem can be polished by a much softer polish powder. Only one polishing agent should be used on a buff. Polishing does not remove any material from the surface. If scratches develop, the stone must be re-sanded.

It is impossible to obtain a high glossy finish on very soft materials, especially if they tend to be slightly porous, fibrous or granular. As a last resort with this type of material, a finish gloss can be given by the use of spray varnish. (TVGMS note: if you use a spray varnish, make sure to disclose it to whoever receives the finished item.)

BUFFS

- **Canvas:** Canvas is useful when polishing heat-sensitive stones because it develops very little friction.
- **Muslin:** Muslin buffs are recommended for soft stones and gems that are heat sensitive.
- **Leather:** Leather is a versatile buffing material that is both efficient and economical. Leather generate heat, but not as much as felt
- **Felt:** Felt is useful for polishing glass and stones of even texture. It is not recommended for gemstones that under cut. Friction on felt generates heat.
- **Phenolic:** Phenolic tools of phenolic lap disc (cab laps) are useful when impregnated with diamond grit. 14,000 or 50,000 Micron (polish) diamond compound can be applied to the surface of the gemstone and worked with a phenolic carving tool. It can also be applied to the surface of a phenolic lap disc and worked with the gemstone mounted at the end of a dop stick. The diamond will charge the phenolic plate making smoothing and polishing easier.

POLISHING COMPOUNDS

- **Cerium Oxide:** Cerium oxide will polish at a faster rate than conventional polishing compounds and produce a superior optical lens surface with no staining or caking. Because it will polish faster, a lower concentration can be used. It is recommended for use on leather, felt, polyurethane foams, and thermoplastic polishing pads. It is a favored polish for quartz type minerals and other gemstone types. It is not recommended for gemstones that will undercut.
- **Linde "A":** a 0.3 micron aluminum powder that is carefully graded for uniformity of grain size. It is excellent for polishing stones that will undercut. It is excellent for hard to polish stones.
- **Chromium Oxide:** Chromium oxide is a hard polishing agent. It is green in color and stains badly. It is useful for polishing jade and stones that will undercut.
- **Tin Oxide:** Tin oxide is an excellent general purpose polish. It is used to provide a final high gloss finish.
- **Diamond:** Diamond grit is the most efficient polishing medium. It is especially useful for polishing difficult to polish stones.

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Material	BUFF					POLISHING COMPOUND				
	Canvas	Phenolic	Felt	Leather	Muslin	Cerium Oxide	Chrome Oxide	Diamond	Linde "a"	Tin Oxide
Agate		C	A	B		A-B		C		
Amethyst		C	A	B		A-B		C		
Beryl		D	A	B-C		A	C	D	B	A-B
Calcite				B	A					
Chloastrolite			A			A				
Feldspar			A			A				
Garnet		C	A-B			B	A	C		
Glass						A				
Goldstone						A			B	
Hematite	B				A	A			B	A
Howlite			A	B					A	C
Jadeite				A-B	C		B		B	
Jasper			A	B		A			A	
Lapis Lazuli				A-B			B		A	
Malachite				A-B			B		A	
Nephrite-jade				A-B	C		B			C
Obsidian			A			A				
Opal-Australian			A		B	A				B
Opal-Mexican		A						A		
Psilomelane				A-B					A	B
Petosky Stone	A									A
Quartz		C	A	B		A-B		C		
Rhodochrosite				A-B					A	B
Rhodonite				A-B		B			A	
Serpentine				A-B					A	B
Sodalite			A			A				
Thomsonite			A			A				
Tigers Eye				A					A	
Tourmaline	C			A-B			B	C	A	
Turquoise				A-B					A	B
Unakite			A			A				
Variscite			B-C	A		B			A	C
Wonderstone			B-C	A					A	C

Match letters across the rows for best combination of Buff and polishing compound

For example for buffing and polishing an Agate the best combinations are

Felt (A) buff with Cerium Oxide (A-B) Polishing Compound or a Leather Buff (B) with Cerium Oxide (A-B)

Polishing Compound or Phenolic (C) Buff with Diamond (C) Polishing Compound