

Polishing Cloth Information

Storage

Prior to use, store polishing cloths flat and in their original packaging to avoid damage or contamination.

Adhesive-backed cloths: After an adhesive-backed cloth has been applied to a platen, it should remain there until it is no longer effective. If removed and reapplied, the adhesive may become ineffective.

Magnetic system cloths: Keep these cloths as flat as possible to prevent bending, curling or damage. If using a storage cabinet, magnetic fastening bases (#90-208XXX) can be applied to the drawers or shelves to hold the cloths flat between uses.

NOTE: If not using a storage cabinet, cloths should be inserted into a re-closeable bag and placed in a drawer or on a shelf. It might be helpful to label the bag with information such as abrasive type and size, lubricant, material polished, date and the operator. This can prevent confusion and cross-contamination during polishing. For example, cloths used to polish hard materials should not also be used to polish soft materials (i.e., steel and copper), as the hard materials leave behind particles that may produce unwanted scratches in soft materials.

Using a cloth for the first time

Diamond: Prior to first use, the cloth should be "charged" with diamond particles and lubricant with sufficient quantities of both. For subsequent uses, diamond and lubricant can be lightly applied, as required to obtain proper performance. For example, the amount applied for initial charging may be 3-4 times the amount for normal use.

Alumina/Silica: Prior to first use, the cloth should be soaked with water while spinning, and checked for foreign particles (running a finger across the cloth works well). The appropriate amount of solution can then be applied.



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Expected Life

Indications that a polishing cloth may need to be changed include:

- Visible breakdown and deterioration of the fabric
- Established method no longer provides expected polishing results

The following factors influence cloth life:

- Sample hardness
- Sample surface area
- Applied force/load
- Mounting material
- Polishing time
- Number of samples polished at one time
- Lubricants used
- Abrasive types and sizes
- Platen and power head rotation speeds
- Storage and maintenance
- Cloth type

Cloth Cleaning

Diamond compound/suspension/spray: Because most diamond abrasive/lubricant combinations do not dry out or crystallize, and diamond is relatively expensive, cleaning may only be necessary when "sludge" buildup is excessive on the outer rim of the cloth, or when the cloth becomes contaminated. A contaminated cloth may be salvaged by thoroughly rinsing it with soap and water, using a brush or flat object while spinning to pull contaminants out of the cloth fibers.

Final polishing powders, slurries and suspensions: Because final polishing powders and suspensions (alumina, colloidal silica) can dry out and/or crystallize, the cloth may need to be cleaned at the end of each cycle. A water rinse while pressing a clean, flat object as the platen spins should be sufficient.

Sample Cleaning

To prevent sample scratches and cross-contamination of cloths, sample surfaces should be cleaned thoroughly between grinding and polishing steps to remove debris that normally accumulates. Samples can be cleaned using a soft brush and cleaning solution, followed by a rinse with isopropyl alcohol or ethanol and a gentle dry using compressed air.