Sharpening Grit Chart

With so many sharpening products to choose from, and such varied opinions as to their use, it’s helpful to organize the various products according to their grit and purpose. We’ve attempted to compare the most commonly available diamond stones, oil stones, water stones, sandpaper, honing film, diamond paste and honing compounds. While we’ve organized the list into ten levels, not every level is necessary for achieving a sharp edge. Some levels will produce only a small improvement and may be skipped altogether.

This chart is based on our own research and personal experience. It should be noted that natural stones can be difficult to rate. Some have said that their Arkansas stones seem to sharpen at a different grit than they would expect based upon the perceived hardness. Honing compounds are even more difficult to categorize, as color seems to be based more upon the preference of the manufacturer than the actual grit within. Two sticks from two different companies may be the same color while they may perform vastly different in use. And finally, the availability of stone and sandpaper grits may vary from region to region. Some may have access to a wider range of sandpaper grits than appear on this chart.

We realize that choosing sharpening products is a hotly debated subject, and remains a matter of personal preference. But this chart should serve as a general guide and go a long way to clearing up the confusion a new woodworker is likely to experience.

-Stumpy Nubs; Blue Collar Woodworking, The Old-Timey Workshop

Level 1: Very Coarse (100+ micron / under 220 grit)
2X Coarse Diamond Stone; Coarse Crystolon Stone; 80-200 grit sandpaper

For removing material quickly to repair a chipped edge or re-establish a primary bevel.

Level 2: Coarse (60-100 micron / 220-320 grit)
Extra Coarse Diamond Stone; Coarse India Stone; 220 grit water stone; 220-320 grit sandpaper

For quickly establishing a primary bevel without the need for extensive repairs.

Level 3: Medium Coarse (45-60 micron; 400 grit)
Course Diamond Stone; Medium Crystolon Stone; 400 grit sandpaper

Beginning stage for a moderately dull bevel before continuing on to finer grits.
**Level 4: Medium** (35-45 micron / 600 grit)
Medium India Stone; Fine Crystolon Stone; 600 grit sandpaper;

*For refining a moderately dull bevel before honing.*

**Level 5: Medium Fine** (25-35 Micron / 800 grit)
Fine India Stone; 800 grit sandpaper; Black Emory honing compound

*Beginning honing stage for the primary bevel; first stage for knife sharpening.*

**Level 6: Fine** (15-25 micron / 1000-1500 grit)
Fine Diamond Stone; Soft Arkansas Stone; 1000 grit water stone; 1000-1500 grit sandpaper;

*Final honing stage for primary bevel; factory stage for knife sharpening.*

**Level 7: Extra Fine** (8-15 micron / 2000-2500 grit)
Extra Fine Diamond Stone; Hard Arkansas Stone; 2000-2500 grit sandpaper; 15m honing film; White honing compound

*Beginning stage for polishing or producing a micro bevel; finer edge for knives.*

**Level 8: Very Fine** (4-8 micron / 4000 grit)
Hard Black Arkansas Stone; Hard Translucent Arkansas Stone; 4000 grit water stone; 5m honing film; 6mic diamond paste; Brown Tripoli honing compound

*Final stage for most bench chisels and knives*

**Level 9: Extremely Fine** (2-4 micron / 8000 grit)
8000 grit water stone; 3mic diamond paste; Red Rouge honing compound

*For producing a polished edge on smoothing planes and fine paring chisels, the final step for most sharpening purposes.*

**Level 10: Crazy Fine** (0.5-2 micron / 9000+ grit)
10,000+ grit water stone; Green/Gold Honing Compound; 0.5mic honing film; 1mic Diamond Paste
For producing a flawless, mirror edge on razors. Woodworking tools are unlikely to stay at this level for very long.

**Types of abrasives in sandpaper and stones**

**Garnet: Not for sharpening**

Garnet is a naturally occurring mineral used in inexpensive sandpaper. It works well for wood, but isn’t hard enough to effectively sharpen steel.

**Aluminum Carbide: Cuts fast, wears quickly**

Aluminum carbide is a very hard substance that will cut steel easily. It is brittle so the particles will fracture, exposing sharp new edges. But once the particles all break up, the sandpaper stops cutting. This type of abrasive is commonly found on the black wet/dry sheets for automotive body work. Norton uses silicon carbide to create their Crystolon stones.

**Aluminum Oxide: Cuts well, wears well**

Aluminum oxide is the most common abrasive used for tool sharpening because, while it’s not as hard as aluminum carbide, it still cuts steel well. It’s not as brittle, so the particles last longer, but since those particles don’t fracture as easily, the wear smooth causing the paper to cut slower over time. A solution has been found by binding the particles together to produce man-made water stones and grinding wheels. The binders allow the particles to break off, exposing the fresh particles underneath.

**Novaculite: Oil Stones**

Novaculite is a naturally occurring mineral commonly found in regions like Arkansas. It comes in several densities from soft and course to hard and fine. These stones are typically used with oil, but water can be an effective lubricant as well. They are very durable but cut slowly.

**Crystolon: See silicon carbide**

**Diamond: Fast cutting, long lasting**

Diamond stones are man-made and popular among woodworkers because they stay flat and last a long time. Cheaper stones are poly-crystalline and tend to wear quicker that the more expensive mono-
crystalline stones. Some diamond plates have spots on their surface where no diamond particles exist to encourage more effective removal of the metal shavings during use.

There are, of course, many other types of abrasives used for sharpening, but these represent those most commonly applied to woodworking tools. For more information on everything woodworking, or to watch free episodes of the best woodworking shows on the internet, visit Stumpynubs.com!