



Solutions. Start to Finish.

Why Ceramic Abrasives Outperform Your Current Coated Abrasive



In recent years, you may have noticed an increase in the use of ceramic in abrasive products. While people working with ceramic goes back thousands of years, over just the past few it has found its way into the finishing processes of several industries, including aerospace, construction, fasteners, industrial, marine, metalworking, MRO, oil field, ship building and welding.

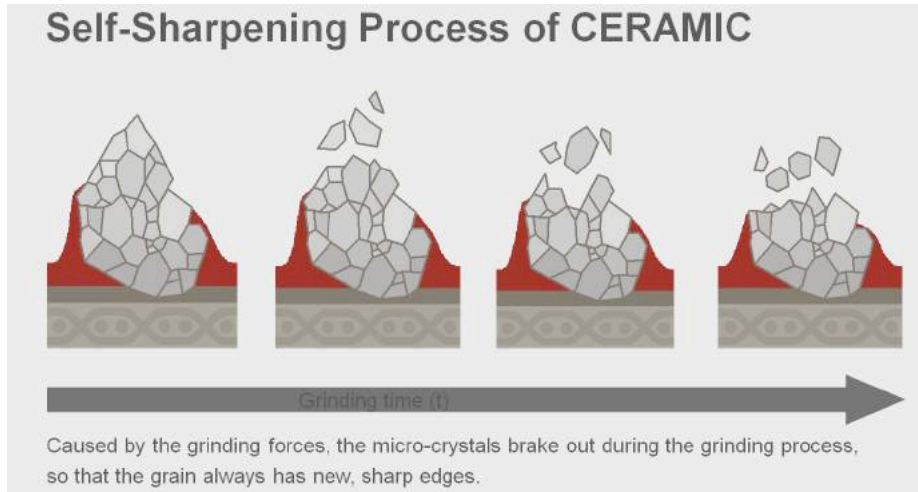
[Ceramic abrasives](#) are a breakthrough for finishing and shaping in a variety of applications, and their use is sure to expand into an even broader range of industries in the near future.

Currently, ceramic abrasives are being used in applications such as abrasive jet cutting, blasting, blending, burnishing, cleaning, surface preparation and intermediate cutting. They are also being utilized in the processes of deburring and deflashing, descaling and stripping, fast cutting and aggressive material removal, grinding and ball milling, peening, polishing and lapping, and tumbling and mass finishing.

How Ceramics are Different

A principal feature of ceramic abrasives is their density, which allows for an outstanding grinding and finishing performance on a wide variety of materials.

The key to this is the way in which the grain, or grit, wears down. Unlike standard abrasives, which will smooth out throughout the course of their life, ceramics break away, or fragment, giving them a continuous, new cutting edge. This results in a 50% longer lifespan of ceramics compared to standard abrasives.



This technology also allows certain ceramics to provide a cut rate up to 400% faster than standard silicon carbide or aluminum oxide filaments. Ceramics don't conduct heat, allowing them to run cool and stain free. In addition, they can withstand extremely high temperatures, ranging from 1,000 °C to 1,600 °C (1,800 °F to 3,000 °F).

Due to the toughness of ceramics, at a grit of P40, both ceramic and zirconia have comparable scratch patterns. However, at a grit of P60 and up, ceramics outperform zirconia with a much finer scratch pattern. This is because zirconia requires heat in order to become aggressive, which is difficult to achieve at a higher grit.

Why Make the Change?

Ceramic abrasives provide the longest life and fastest cut rate of all coated abrasives. They represent the ultimate in performance by providing an aggressive cut that, compared to other abrasives, requires less pressure to be applied by the user, saving them their energy.

Switching to ceramic abrasives can improve the quality of your work — finer scratch patterns, no burning or staining, minimal loading — as well as reduce your equipment's use, lengthening its life. Ceramic abrasives' versatility makes them a welcome addition to, or replacement for, your current coated abrasives.

Be sure to take a look at the wide range of ceramic products Mercer Abrasives has to offer, and if you're in need of more information, feel free to check out our [website](#) or reach out to our customer service team.