

# Cerastic

Cerastic is a family of ceramic-plastic polymer materials designed for heavy commercial and industrial use. Designed in [YE 40](#) by [Origin General Manufacturing](#)

## About Cerastic

Cerastic is a ceramic-plastic polymer type material which was developed for industrial purposes, but is more than capable of being used in commercial and consumer applications. Its applications range from a simple chafe-resistant hose wrapping material, up to lightweight cladding for structures, and nearly anything in between.

In its most basic form, Cerastic is a plastic-like polymer that has been infused with ceramic particles, as well as a number of substances that help it to reduce friction, resist wear, and resist breaking down in most environments. It can resist both strong acids and strong bases, as well as being resistant to heat, cold, and even many forms of radiation, including UV rays. Stronger types of Cerastic can also be impregnated with other materials, such as Aramid fibers, Carbon Nanotubes, and even Aggregated Diamond Nanorods.

Cerastic in and of itself is lightweight, cheap, and easy to produce as well as easy to form into complex shapes when suggested to high enough temperatures and pressures, and will remain liquid for a reasonable amount of time before cooling and hardening, which allows it to be injection molded. Temperatures and pressures needed to mold the material remain the same regardless of the strengthening additives, though chemical additives can increase or decrease the melting point for desired results.

## Types of Cerastic

There are a few types of Cerastic which provide usability in multiple applications. Cerastic can be flexible and pliable, or rigid and hard depending on the type and the requirements of the application. All types of Cerastic are inexpensive, although the Extra and Ultra varieties are more expensive than the Basic.

### Cerastic Flex Basic

Cerastic Flex Basic is the cheapest version of the flexible type of Cerastic. It contains a softer version of the polymer which allows it to be flexible and somewhat pliable, rather than rigid or brittle. This type of Cerastic can still be made rigid with enough thickness, but under force will have a tendency to flex, giving way at a lower amount of force than the rigid types would break at.

## Cerastic Flex Ultra

Cerastic Flex Ultra is the same as Cerastic Flex Basic, with similar properties, however, it has been impregnated with Aramid fibers. These fibers give the material the ability to flex while increasing its resistance to pulling, cutting, and impaling forces, making it especially useful as a covering or wrapping for flexible hoses and similar applications where movement is required but protection is needed.

## Cerastic Rigid Basic

Cerastic Rigid Basic is the cheapest version of the rigid form of Cerastic. It contains a harder version of the polymer which is more rigid and becomes brittle at its breaking point, shattering rather than deforming, however, it takes quite a bit of force in order to break it. Cerastic Rigid tends to remain rigid to a much higher point than Cerastic Flex, but instead of giving way at its limit, it breaks or shatters cleanly.

## Cerastic Rigid Extra

Cerastic Rigid Extra is the same as Cerastic Rigid Basic with the main difference of being impregnated with Carbon Nanotubes. These nanotubes increase the material's resistance to force and allows it to hold together to a much higher point than Cerastic Rigid Basic.

## Cerastic Rigid Ultra

Cerastic Rigid Ultra is the strongest form of Cerastic, having the highest resistance to any force or form of energy that might be directed at it. While the composition is mostly the same as the other types, it is impregnated with Aggregated Diamond Nanorods, giving it a much higher resistance to force and energy (either kinetic or heat) than any of the other types. Naturally, this type is also the most expensive and is somewhat more difficult to work with.

## OOO Notes

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