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Sapphire

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Mi-Net Technology is a supplier of Sapphire in sheet,tube, rod and component form. Sapphire is the material of choice for engineers faced with the design challenges of extreme conditions such as those found in high-temperature, high-pressure or harsh chemical & physical environments. Its unique properties make it a cost-effective solution for those applications where long life and high performance are critical.

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One of the hardest materials in existence, sapphire is virtually scratch proof which helps it maintain its integrity in demanding physical environments. It has a melting point of over 2000 degrees Celcius, making it ideal for high-temperature applications. It is chemically inert and easily withstands harsh chemicals such as fluorine plasma and other industrial gasses and fluids, with no particle generation. In addition sapphire can transmit ultraviolet, visible and infrared light was well as microwaves, a range broader than most materials.

Key Advantages of Sapphire

- Single (Al2O3) crystal, highest purity possible, no grain boundaries
- Minimal to no particle contamination
- High melting point, 2053 degrees C
- Hardness next to diamond on Moh’s Scale of Hardness: extremely scratch-resistant
- Chemically inert (non-reactive in most process environments)
- Superior rigidity (435 Gpa, 6x stiffer than quartz)
- Transparent - transmits UV - visible - IR wavelengths
- Can be made in complex shape

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