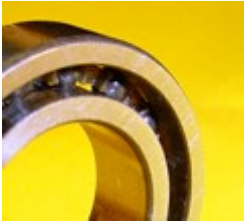


***If you haven't found it, you probably haven't tried MBA***

[www.minibearings.com.au](http://www.minibearings.com.au)

[sales@minibearings.com.au](mailto:sales@minibearings.com.au)

## Ceramic Bearings and Ceramic Hybrid Bearings



### Ceramic Hybrid Bearings

A Ceramic Hybrid Bearing is a bearing with Steel Races and Ceramic Balls. The balls are usually Si<sub>3</sub>N<sub>4</sub> (Silicon Nitride), and the races can be either SAE52100 Chrome Steel or AISI440C Stainless Steel.

#### Benefits of the Ceramic Hybrid Bearing

- Ceramic balls are harder often resulting in longer life.
- Ceramic balls are usually smoother resulting in less vibration.
- Ceramic balls are non-metallic meaning no magnetic build up and longer life due to no micro-welding between balls and races.
- More tolerant of reduced lubrication.

**(Benefits listed are subject to the prevailing conditions and may not apply to all applications)**



### Ceramic Bearings

A Ceramic Bearing is a bearing with Ceramic Races and Ceramic Balls. Ceramic Bearings may be either Si<sub>3</sub>N<sub>4</sub> (Silicon Nitride - Grey) or ZrO<sub>2</sub> (Zirconia - White).

#### Benefits of the Ceramic Bearing

- High Temperature. Cages fitted to Ceramic Bearings are often made from PTFE which can withstand temperatures up to 260°C.
- With no cage the Zirconia Bearing can be used in temperatures exceeding 1000°C whereas Silicon Nitride can be used to around 700°C.
- Silicon Nitride Bearings can run at loads and speeds approaching those of steel bearings. Zirconia is reserved for slower less loaded applications.
- Inert to water and most chemicals.
- Non magnetic
- Can be used without lubrication
- No heat build up due to friction



**(Benefits listed are subject to the prevailing conditions and may not apply to all applications)**

