

99% Al₂O₃ Ceramic Bearings

Alumina ceramic bearings use alumina ceramics with an alumina content of 99% as the material. The rolling elements also use alumina ceramics.

The main properties of alumina are as follows:

High wear resistance; in the high frequency range from DC to gigahertz, its dielectric properties are very excellent; at high temperatures, resistance to various strong acids and alkalis; good thermal conductivity; excellent dimensional and shape stability; High strength and hardness. Alumina with a purity of 94% to 99.5% can easily form metal composites and can be used in high temperature fields.

Application of alumina:

Gas laser machine; Core box panel; Sealing ring; High temperature electrical insulator; High voltage insulator; Furnace lining pipe; Ceramic yarn guide; Electronic substrate; Bulletproof armor; Wear-resistant pipe and elbow liner; Temperature measuring sensor; Laboratory instrument fittings; Thermal testing instrument components; Grinding medium, etc.

Performance of alumina all-ceramic bearings and retainers with different materials :

Ferrule	Type	Retainer	Maximum Service Temperature	Decay Resistance	Application Occasions
Al ₂ O ₃	Al ₂ O ₃	PTFE	180°C	Excellent	Semiconductor equipment, LCD equipment, food equipment, plating equipment, chemical equipment, textile equipment, medical equipment, etc.
Al ₂ O ₃	Al ₂ O ₃	PEEK	260°C	Excellent	
Al ₂ O ₃	Al ₂ O ₃	PA66/UPE/PP	90°C	Excellent	
Al ₂ O ₃	Al ₂ O ₃	-	1400°C	Excellent	