

Technical Data Sheet

4YSZ (powder and suspension)

Innovnano's 4 mol % Yttria-stabilised Zirconia (4YSZ) is available as a free-flowing granulated powder or as a high % solids suspension. Its ultrafine nanostructure enables a specific coating structure for superior characteristics and high performance.

Chemical analysis

ZrO ₂ + HfO ₂ + Y ₂ O ₃ + Al ₂ O ₃ (wt. %)	> 99.9
HfO ₂	< 3.0
Y ₂ O ₃	7.5 ± 0.5
Al ₂ O ₃	< 0.08
SiO ₂	< 0.015
Fe ₂ O ₃	< 0.025
Na ₂ O	< 0.005
Other oxides (CuO, ZnO, MgO, CaO)	< 0.07

Physical properties (spray dried powder)

Primary particle D50 (nm)	~ 50
Powder D50 (nm)	400 - 500
Granule D50 (µm)	~ 60
Specific surface area (m ² /g)	25 ± 3

Physical properties (suspension)

Primary particle D50 (nm)	~ 50
Powder D50 (nm)	400 - 500
Solids content (wt. %)	to 40
Specific surface area (m ² /g)	25 ± 3



Nanostructured powders for demanding ceramic applications

Innovnano is a specialist manufacturer of high quality nanostructured zirconia-based powders and aluminium zinc oxide (AZO) sputtering targets. Using a unique synthesis technology - emulsion detonation synthesis (EDS) - Innovnano guarantee small grain sizes and excellent chemical homogeneity for high performance powders that support hi-tech industries.

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