



Zircar Zirconia, Inc.
"Manufacturer of the original ZIRCAR products" ©

ZIRCONIA POWDER TYPE ZYP

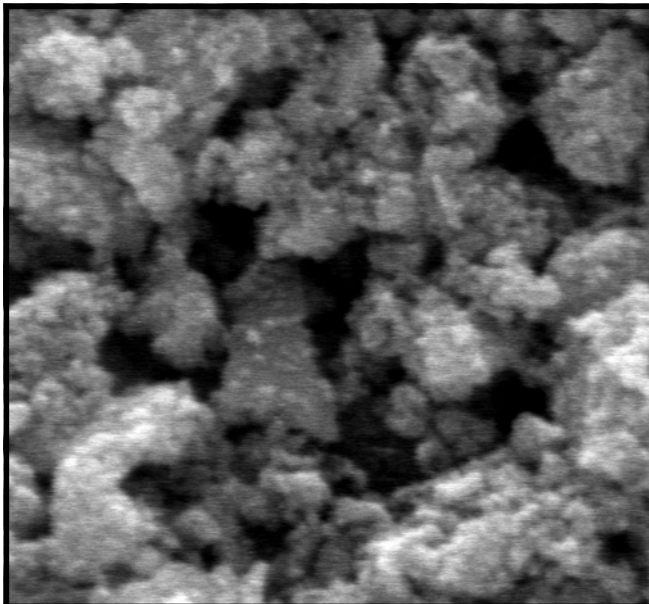
APPLICATION INFORMATION

- **ZYP** is used for filtration media
- **ZYP** can be used in the fabrication of Oxygen sensors
- **ZYP** can be used in thermal barrier coatings for gas turbines and diesel engines
- **ZYP** can be used as a grain growth inhibitor for non-oxide ceramics

FEATURES

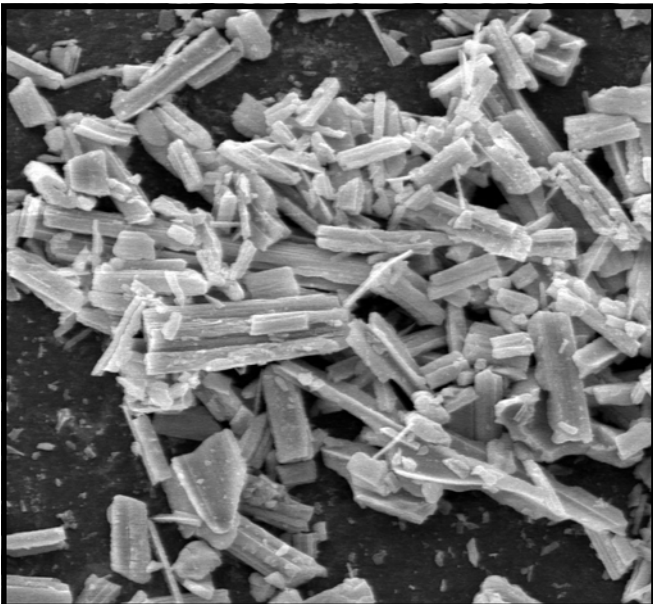
- **Available in Two Surface Areas**
- **Extreme Environmental Stability**
- **Stabilized with ~10 wt% Yttria**
- **Low Sintering Temperature**
- **Pre-fired and Organic Free**
- **Available 'Off the Shelf'**

Zircar Zirconia Powder Type **ZYP** is an ultra fine, highly reactive powder composed of yttria-stabilized zirconia. It is offered with two different surface areas; Type **ZYP-30** has a surface area of 25-35 square meters per gram while Type **ZYP-55** has a surface area of 50-60 square meters per gram. Sintering of **ZYP** powder particles begins around 900 °C and zirconia ceramic bodies approaching theoretical density can be achieved using **ZYP** as low as 1450 °C.



Mag:20000 kV:20 WD:20 1 µm

ZYP-30 is supplied as ~ 1 micron, irregular agglomerates of sub-micron particles.



Mag:1000 kV:20 WD:27 10 µm

ZYP-55 is supplied as whisker shaped agglomerates of sub-micron particles.

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Product Data
Bulletin #B-H
January 2004
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PROPERTIES & CHARACTERISTICS

	ZYP-30	ZYP-55
Nominal Composition, Wt%		
ZrO ₂ *	90	90
Y ₂ O ₃	10	10
Trace Impurities	<1	<1
H ₂ O	0.15	0.39
Cl ⁻	0.5	1.2
Loss on Ignition, Wt%	1.8	3.1
Surface Area, square meters/gram	25-35	50-60

*1-2% hafnia occurs naturally with zirconia and does not affect performance.

ORDERING INFORMATION

Zircar Zirconia Powder Type **ZYP** is available in two standard surface areas listed below. In addition, powders with more, less, or no yttria can be made. Custom made surface areas and quantities are quoted on request. Reactor grade powder containing 100 ppm maximum hafnia is also available on a custom basis.

TO ORDER SPECIFY: Quantity, Item # and Size.
Example: 8 each, Item # BH001, ZYP-55, 1.0 pound

Standard Sizes	Item Number
ZYP-55, 50-60 m ² /gram, 1.0 pound	BH001
ZYP-30, 25-35 m ² /gram, 1.0 pound	BH008

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