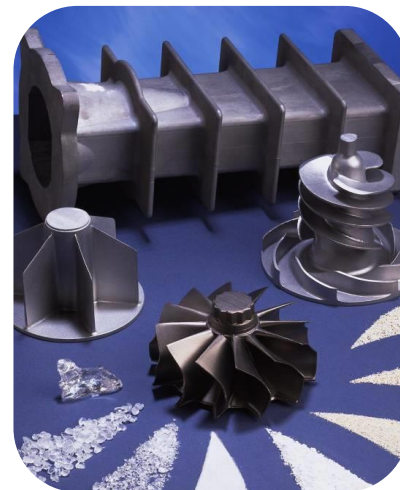


# dupré ZIRCON

## (ZIRCONIUM SILICATE)



### DESCRIPTION

Zircon (Zirconium Silicate) is a high density refractory mineral with a high melting point and excellent resistance to alkalis. The ore is mined, concentrated and processed into high purity sand. This sand can then be milled to a flour of a controlled particle size distribution.

### USES

Refractory materials, ceramics, opacifier in glazes, primary slurries and stuccos in Lost Wax Process Casting (Shell casting).

### TYPICAL PROPERTIES

#### TYPICAL PHYSICAL PROPERTIES

|   |     |                              |     |                           |       |
|---|-----|------------------------------|-----|---------------------------|-------|
| <b>Particle Density / g cm<sup>-3</sup></b> | 4.6 | <b>Hardness (Mohs Scale)</b> | 7.5 | <b>Melting Point / °C</b> | >2200 |
|---|-----|------------------------------|-----|---------------------------|-------|

| Calcined Zircon Flour | Particle Size Analysis (Malvern Mastersizer 2000) |          |          | Wet Sieve Analysis (% retained) |               |               |
|-----------------------|---|----------|----------|---------------------------------|---------------|---------------|
|                       | d10 / μm  | d50 / μm | d90 / μm | +200# (75 μm)                   | +300# (53 μm) | +325# (45 μm) |
| <b>M172</b> (325#)    | 2.12  | 22.34    | 65.26    | < 1%                            | -             | < 10%         |
| <b>M173</b> (200#)    | 4.39  | 32.67    | 85.99    | < 10 %                          | <25 %         | -             |

| Calcined Zircon Sand | Dry Sieve Analysis (% retained) |               |               |                |                 |                 |                 |             |
|----------------------|---------------------------------|---------------|---------------|----------------|-----------------|-----------------|-----------------|-------------|
|                      | 30# (0.5 mm)                    | 60# (0.25 mm) | 85# (0.18 mm) | 100# (0.15 mm) | 120# (0.125 mm) | 150# (0.106 mm) | 200# (0.075 mm) | -200# (Pan) |
| <b>M170</b>          | Nil                             | Nil           | 1.5 %         | 12.1 %         | 26.9 %          | 27.4 %          | 31.2 %          | 0.9 %       |

### TYPICAL CHEMICAL ANALYSIS

|  |      |                                      |        |                                     |        |
|--|------|--------------------------------------|--------|-------------------------------------|--------|
| <b>% ZrO<sub>2</sub> + HfO<sub>2</sub></b> | 66.3 | <b>% TiO<sub>2</sub></b>             | 0.11   | <b>% CaO</b>                        | < 0.05 |
| <b>% HfO<sub>2</sub></b>                   | 1.4  | <b>% Fe<sub>2</sub>O<sub>3</sub></b> | 0.08   | <b>% MgO</b>                        | < 0.05 |
| <b>% SiO<sub>2</sub></b>                   | 32.7 | <b>% Na<sub>2</sub>O</b>             | < 0.05 | <b>% P<sub>2</sub>O<sub>5</sub></b> | 0.10   |
| <b>% Al<sub>2</sub>O<sub>3</sub></b>       | 0.10 | <b>% K<sub>2</sub>O</b>              | < 0.05 | <b>Free SiO<sub>2</sub></b>         | 0.11   |

### PACKAGING AND STORAGE

- Zircon is supplied in 25 kg paper sacks.
- Reseal packaging when not in use to prevent contamination and moisture pickup.
- Refer to the latest SDS for more information.



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*Information presented above is given in good faith as accurate and reliable but is not to be taken as a guarantee. The figures provided are intended to be a guide to expected average values and should not be interpreted as a specification. Any potential applications referred to are not to be construed as recommendations. It is the responsibility of the user to determine suitability for any specific purpose.*

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