



PREMIUM ZIRCON

Thunderbird Project

SheffieldResources
LIMITED

Premium Zircon

The Thunderbird deposit will produce a Premium Zircon product with a high ZrO₂ content in conjunction with very low trace elements, allowing the material to be suitable for many varied applications. Major applications for premium grade zircon sand include:

- Ceramics industry: opacifier in glazes and frits, flour
- Specialty castings: foundry applications
- Refractories: refractory bricks, furnace linings, abrasives
- Specialty markets: chemical zirconia, high end applications such as zirconium metal, fused zirconia, electronics

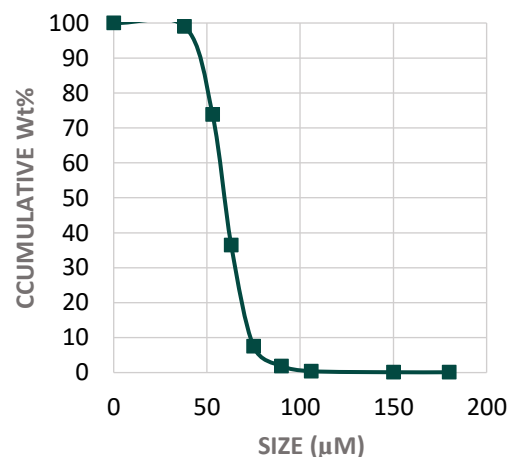
Premium Zircon Key Characteristics

The primary zircon product is premium grade zircon for the ceramic sector and has the following characteristics:

- High ZrO₂+HfO₂ grade up to 66.6%
- Low levels of the key contaminant Fe₂O₃
- Low in contaminants TiO₂ and Al₂O₃
- Moderate U+Th levels (570-590ppm)
- Fine to medium grained (D₅₀ 57µm)
- Good opacity, similar to other competing products in the marketplace

Composition (%)	Units	Typical	Range	
			Low	High
ZrO ₂ +HfO ₂	%	66.3	66.2	66.6
TiO ₂	%	0.15	0.09	0.20
Fe ₂ O ₃	%	0.08	0.06	0.10
SiO ₂	%	32.5	32.5	33.5
Al ₂ O ₃	%	0.15	0.10	0.15
U XRF	ppm	330	320	360
Th XRF	ppm	280	250	300

Table 1: Premium Zircon product specifications and grain size.



Contact

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