

Guaranteed Specifications (wt% by XRF)

Grade	ZCO-1	ZCO-2	ZCO-3H	ZCO-3L	ZCO-4
ZrO ₂ +HfO ₂ (%)	≥95.0	>96.6	>98.0	>98.5	>98.5
SiO ₂ (%)	<4.00	<2.50	<1.00	<0.60	<0.35
Al ₂ O ₃ (%)	≤0.60	≤0.60	≤0.50	≤0.50	≤0.50
Fe ₂ O ₃ (%)	≤0.10	≤0.10	≤0.10	≤0.10	≤0.10
TiO ₂ (%)	≤0.25	≤0.25	≤0.25	≤0.25	≤0.25

Typical Chemical Analysis (wt% by XRF)

Grade	ZCO-1	ZCO-2	ZCO-3H	ZCO-3L	ZCO-4
ZrO ₂ +HfO ₂ (%)	95.5 – 97.0	97.0 - 98.5	98.9 - 98.5	98.9 - 99.2	99.1 - 99.4
SiO ₂ (%)	2.5 - 4.0	1.0 - 2.5	0.6 - 1.0	0.35 - 0.6	0.1 - 0.35
Al ₂ O ₃ (%)	0.1 - 0.4	0.1 - 0.4	0.1 - 0.4	0.1 - 0.4	0.1 - 0.4
Fe ₂ O ₃ (%)	0.02 - 0.05	0.02 - 0.05	0.02 - 0.05	0.02 - 0.05	0.02 - 0.05
TiO ₂ (%)	0.1 - 0.15	0.1 - 0.15	0.1 - 0.15	0.1 - 0.15	0.1 - 0.15
BaO (%)	0.02 – 0.15	0.02 – 0.15	0.02 – 0.15	0.02 – 0.15	0.02 – 0.15
CaO (%)	0.02 – 0.04	0.02 – 0.04	0.02 – 0.04	0.02 – 0.04	0.02 – 0.04
U+Th (ppm)	600 - 700	600 - 700	600 - 700	600 - 700	600 - 700
Specific Activity (Bq/g) ¹	5.5 - 6.5	5.5 - 6.5	5.5 - 6.5	5.5 - 6.5	5.5 - 6.5

¹ Specific Activity is calculated from the U & Th assay

Typical Physical Properties (0.5F)

Tapped Bulk Density	3.1 g/cm ⁻³
Loose Bulk Density	2.6 g/cm ⁻³
Specific Gravity	5.75
Crystal Structure	monoclinic
Moisture	0.1%
LOI	0.1%

Radioactivity

ZCO contains low levels of U and Th (U + Th ~ 650ppm, ~6 Bq/g). When following recommended safe handling practices, radiation exposure is unlikely to exceed 0.3mSv/year. ZCO containing lower levels of U and Th are also available.

Other Information

See www.doral.com.au for Material safety data sheet
 EINECS NO. 215-227-2
 CAS NO. 1314-23-4

Packing

Standard packing is in 1 tonne bulk bags or 25kg multi-wall paper bags.
 Milled product batches can be blended in 5 tonne lots for consistency of chemistry.

Contact Details

To obtain further information about our products, please visit our website www.doral.com.au

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