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Family of Zirconium Oxide Specialty Products

Water-Based Coatings

- [Type Z](#) ... washcoating: soft but very high-purity of over 99% % CaO-stabilized ZrO_2 after firing; usable vacuum/inert to 2000 C but not recommended for applications in air atmosphere
- [Type YSZ](#) ... fully stabilized Y_2O_3 -stabilized ZrO_2 (98% after firing) coating specially exhibiting good adherence, erosion-resistance/chemical-resistance; good to 2000 C in all atmospheres
- [Type ZO](#) ... CaO-stabilized ZrO_2 (97% after firing) coating with good adherence and stability; usable to over 1800 C in all atmospheres
- [Type ZO Mod](#) ... low-viscosity, abrasion-resistant CaO-stabilized ZrO_2 (86% after firing) coating; good to 1550 C in all atmospheres
- [Type ZO Blackbody](#) ... high-emissivity version of Type ZO based CaO-stabilized ZrO_2 and usable to 1800 C in all atmospheres
- [Zircwash](#) ... unstabilized ZrO_2 (97% after firing) coating with good adherence and stability; usable to 2000 C in all atmospheres
- [Z-Guard](#) ... low-viscosity, abrasion-resistant unstabilized ZrO_2 (86% after firing) coating; good to 1550 C in all atmospheres
- [ZBN Release](#) ... unstabilized ZrO_2 and Boron Nitride as a blue-tinted coating with good adherence to all substrates; give thermal insulation and mold release, with usability to 1000 C in all atmospheres
- [Z-Paste](#) ... tough, abrasion-resistant CaO-stabilized ZrO_2 (90% after firing) paste, usable to 1800 C in all atmospheres
- [SpackleKote Z](#) ... ready-to-use CaO-stabilized ZrO_2 (over 85% ZrO_2/Y_2O_3 after firing) spackling putty composition for use to 1400 C in all atmospheres
- [RefClay Z](#) ... refractory clay of unstabilized Zirconia (over 95% ZrO_2/Y_2O_3 after firing) – moldable/press-formable; after firing, usable to 1600 C in air/OK in all atmospheres
- [Zirconolite Binder](#) ... gel-like liquid of Calcia-Zirconia-Titania (CZT, $CaZrTi_2O_7$) which can form “Syn-Roc” like phases to immobilize/stabilize radioactive wasteforms, usable to 1500 C in all atmospheres
- [Zypcoat CZO](#) ... a coating of Calcium Zirconate or Calcium-Zirconium-Oxide, $CaZrO_3$ usable in air atmospheres as well as inert/vacuum to temperatures to >2000 C.

Powders

- [PlasterMix ZY](#) ... CaO-stabilized ZrO_2 plaster-forming (on adding water) dry powder – after firing, over 92% Zr-Y-O; usable to 1400 C in all atmospheres
- [Zirconia CeraCast Powder](#) ... a dry Zirconium Oxide (ZrO_2) powder mix which, on adding around 25 wt% water and stirring, can be poured/cast into silicone molds to form parts which are typically >= 80% dense after firing to 1300 C.
- [Zirconia Cera Foam DMX Powder](#) ... a ready-to-use, powdered refractory mixture to which water is added to form a slurry. The slurry can then be poured/cast into silicone or metal molds to form free-standing ceramic foam pieces.

Solvent-Based Coatings

- [Z Aerosol](#) ... aerosol spray-can of CaO-stabilized ZrO₂ – forms a soft coating yielding over 98% pure ZrO₂ as fired; air usable to 1900 C/ OK in all atmospheres
- [Z Aerosol Brushable](#) ... “bulk” version (same otherwise as the aerosol-can version)
- [Type ZK Paint](#) ... washcoating with low outgassing; usable in vacuum/inert to over 2000 C but not recommended for applications in air atmosphere
- [YSZ Aerosol Brushable](#) ... a ‘bulk’ solvent-based Yttria-stabilized Zirconia coating that utilizes 9 wt% / 8 mol% Yttrium Oxide-stabilized Zirconia – useful in highly aggressive environments to 1900 C and beyond.