



120 Valley Court
Oak Ridge, TN 37830
Ph: 865-482-5717
FAX: 865-482-1281
zypcoatings.com

Ce-Zn-O 1050 Powder

Cerium Oxide - Zinc Oxide Castable Dry Powder Mixture

Ce-Zn-O 1050 Powder is a dry refractory mixture primarily of Cerium Oxide with Zinc Oxide as the cement former -- which, on adding 42-50 wt% water and stirring, can be filled into silicone molds to form parts. After casting and drying, firing the cast part to only 1050 C results in over 95% dense refractory.

Key Attributes

- Prepared as a slurry from dry mixture by just adding water
- Readily prepared into high density parts by cast-and-sinter technique
- Use-temperature ≥ 1300 C
- Contains no RCF (Refractory Ceramic Fiber)
- Water-based – easy cleanup

Ideal Use

- Casting your own specialty refractory shapes
- Densifying with conventional kilns/furnaces at low-temperature of 1050 C (1922 F)

Use Notes

1. Mix well with water, typically at 42-50% of the powder weight to form a uniform paste consistency. Mixing/working time is about five minutes.
2. After mixing, quickly put the material into a silicone mold and place on vibrating-table for a short while or tamp the mold to allow bubbles to come to surface and dissipate.
3. Dry/set at room temperature overnight. Then further dry at 60 C for several hours or overnight and remove part from silicone mold.
4. Fire/sinter part by heating at slow rate of 1.5 C to 6 C per minute to 1050 C for 4 hours to obtain dense refractory parts.

Example: 40 g. powder + 17 g. water casts a 'puck' of 22 cc [1.5" D, 0.7" H].



Specifications

Active Ingredients	CeO ₂ ; ZnO cement-former
Max Use Temperature with All Atmospheres	≥ 1300 C (2372 F)
Fired Composition	CeO ₂ (over75%),ZnO and proprietary mineralizers (sintering aids)
Color	White
Shelf Life (months)	Indefinite ... but avoid getting wet before use
H F R Ratings	1-0-0

Sizes and colors

Ce-Zn-O 1050 is white colored powder.
Standard Sizes: 1 qt. or 8 oz epoxy-lined can

Safety Information

- Consult SDS before use.
- For industrial use only

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