



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

RefClay Z

Water-based Refractory Clay based on Zirconium Oxide and usable to above 1400 C

RefClay Z is a ready-to-use, water-based, Zirconia (ZrO_2) refractory claylike material that can be press molded to form shapes and then fired to high density at 1400-1600 C.

Key Attributes

- Based on very refractory Zirconium Oxide
- Can be press-formed with silicone or plaster press-molds to most any shape
- Can be sanded/shaped further after thorough drying
- Firing to 1400-1600 C in air forms tough, dense body
- Water-based, safe, and easy to use and cleanup
- Resists cracking
- Contains no Refractory Ceramic Fiber
- Contains no Boron

Ideal Use

- Forming stable refractory parts based on Zirconium Oxide
- Making highly thermal insulating ceramic shapes by merely press forming

Use Notes

1. Remove appropriate amount from container.
2. Trowel/spatulate into silicone or plaster press-mold of the desired shape.
3. Place onto "dental" lab vibrator and vibrate into the mold cavities, first on low and then on higher setting.
4. Remove excess clay by scraping top of part with spatula, trowel, or putty knife; tamp the mold lightly to even out the surface further.
5. Thoroughly dry at room temperature, preferably overnight, while in the mold.
6. Place into lab dryer at 60 C for an hour (or better, for several hours), remove from the mold, dry for 1-2 additional hours. Handle cast/dried pieces gently.
7. Place into furnace to fire to 1400 C to 1600 C, with ½ hr "soak".

NOTE: this yields dense parts good strength after firing; shrinkage is around 50%.

Safety Information

- Consult SDS before use.
- For Industrial Use only.



Specifications

Active Ingredient	Zirconium Oxide – 2% Yttrium Oxide
Max Use Temperature with All Atmospheres	1600 C (2912 F)
Fired Composition	95% ZrO_2/Y_2O_3
Liquid Carrier	Water
Binder Phase	Proprietary
Consistency	Claylike, easily spatulated and press-molded
Color	White
Shelf Life (months)	>12
Coating pH	4-6
H F R Ratings	1-0-0

Sizes and colors

RefClay Z is a white colored refractory claylike material

Standard Sizes: 1 qt. or 8 oz epoxy-lined can

CAUTION: DO NOT CONTACT WET COATINGS WITH MOLTEN METAL.

ZYP Coatings, Inc. (ZYP) makes no warranties, express or implied, including the warranty of merchantability or fitness for a particular service. Product is for industrial/commercial use only. Users should determine suitability for their use. In no event will ZYP be liable for any direct, indirect, incidental, special or consequential damages or losses including, but not limited to loss of profits, in any way related to this product regardless of the legal theory asserted.