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Type ZK

Highest Purity Zirconium Oxide (ZrO₂) Coating

Type ZK is a relatively-soft, low-viscosity, washcoat-type of Zirconium Oxide (ZrO₂) coating that provides very high purity (>99.9% pure) ZrO₂ which is usable in vacuum and inert atmospheres to 2000 C (3632 F). This coating should NOT be used in air atmospheres (use Z-Aerosol there). Type ZK gives minimal out-gassing, complete by 350 C (662C).

Key Attributes

1. Provides the good properties of ZrO₂
 - very low thermal conductivity
 - resistant to reactions with many molten or solid materials
 - low electrical conductivity
2. Applies like house paints
3. Completely outgassed at low temperature -- ideal for mold coating

Ideal Use

- Graphite crucibles and molds used with reactive molten metals
- Anti-stick with brazing and diffusion bonding
- Barrier coating for sintering/ heat-treating reactive metals/materials

Use Notes

1. Resuspend if needed. Can dilute with Ethanol or with YK Binder.
2. Clean surfaces to be painted of any oils dirt, scale, etc.
3. Apply 1-3 layers by brush or spray like ordinary house paint, drying after each layer.
4. Allow to dry thoroughly at room temperature before use.

Safety Information

- Consult SDS before use.
- Avoid breathing of spray/vapors.
- For Industrial Use only.



Specifications

Active Ingredient	ZrO ₂ *
Max Use Temperature	Inert, Vac (no C) 3632 F / 2000 C Vac (with C present) 2732 F / 1500 C Air = NOT RECOMMENDED
Use Atmosphere	Vacuum or Inert
Fired Composition	>99% ZrO ₂ *
Liquid Carrier	Water-Ethanol
Binder Phase	Cellulosic
Brookfield Viscosity (cps)	250 @2/60
Specific Gravity	2.0
Color	Cream
Shelf Life (months)	>12
Coverage (ft ² /gal)	100 to 400
H F R Ratings	1-1-0
Substrate Use	All
other	*with 4 wt% CaO

Sizes and colors

Type ZK is a cream colored paint.

Standard Size: 1 gallon keg container
1 quart wide-mouth Nalgene

CAUTION: DO NOT CONTACT WET COATINGS WITH MOLTEN METAL.

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