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Type YSZ

Type YSZ is a Zirconium Oxide coating which is fully stabilized in the cubic phase with 13 wt.% (7.5 mol.%) Yttrium Oxide

Type YSZ yields a well-bonded Zirconium Oxide coating when applied to ceramic and metal substrates and is non-reactive with many solid or molten ceramics and alloys. Type YSZ has good erosion resistance along with a very high use temperature (> 2000 C). Also, the coating is a 98% pure phase with the remainder being Aluminum Oxide. As a barrier layer to prevent reactions, Type YSZ can be used on stacked metal plates to prevent sticking during heat treating.

Key Attributes

- Non-reactive with solid or molten nonferrous/ferrous metals/alloys
- Good erosion and chemical resistance at high temperatures
- Use temperature of over 2000 C in all atmospheres
- Contains no Boron
- Safe, Water-Based, No VOCs

Ideal Use

- Molten metal processing and transport
- Applications that require temperatures greater than 900-1000 C in air atmosphere where Boron Nitride oxidizes
- Barrier coating to prevent diffusion, reactions, and sticking of parts during heat treating
- Materials requiring zero Boron contamination (aerospace/nuclear areas)

Use Notes

1. Resuspend if needed. Use full strength or dilute with water.
2. Clean surfaces to be painted of any oils dirt, scale, etc.
3. Apply 1-2 layers by brush or spray and dry.

Safety Information

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



Specifications

Active Ingredient	ZrO ₂ fully cubic stabilized by 13 wt.% (7.5 mol.%) Y ₂ O ₃
Max Use Temperature with	
All Atmospheres	>2000 C (> 3632 F)*
Fired Composition	98% ZrO ₂ - 2% Al ₂ O ₃
Liquid Carrier	Water
Binder Phase	Al ₂ O ₃
Brookfield Viscosity	1100 - 2100cps@3/60
Specific Gravity	2.2
Color	White
Shelf Life (months)	>12
Coverage (ft ² /gal)	100 to 400
Coating pH	3.5-4.5
H F R Ratings	1-0-0
Substrate Use	Ceramics and Metals
Other:	Contains no Silicon Oxide and no Boron
	*Limited to 1400 C if Carbon (Graphite) present and in Vacuum

Sizes and colors

Type YSZ is a white paint.
 Standard size: 1 gallon wide-mouth Nalgene
 1 quart wide-mouth Nalgene

CAUTION: DO NOT CONTACT WET COATINGS WITH MOLTEN METAL.

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