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# Aluminum Oxide Traycoat Traycoat-AW

## High Purity Aluminum Oxide (Al<sub>2</sub>O<sub>3</sub>), Water-Based Tray Coating

Traycoat paints are barrier-separation coatings for powder metallurgy and vacuum sintering processes. As such, they are designed for graphite as well as refractory metal or ceramic sintering trays and boats used to over 1500 C in hard vacuum.

Traycoat AW is a ready-to-use water-based paint.

### Key Attributes

- Maintains Consistent Carbon Contents of Sintered Parts
- Prevents Warping
- Extends Tray Lifetime
- Reaction-barrier Layer
- Applied Like House paint
- Safe, Water-Based, No VOC's

### Ideal Use

- Graphite Trays/Boats for Cobalt-bonded WC, TiC, TaC Parts
- Carbon Barrier/Separator Layer
- Reactive Refractory Metal Sintering

### Use Notes

1. Make sure that you need an Al<sub>2</sub>O<sub>3</sub> water-based tray coating.
2. Resuspend; can dilute with water at 10% if desired.
3. Clean surfaces to be painted of any loose graphite/carbon dust, oils, dirt, scale, etc.
4. Apply one thin layer by brush or spray like ordinary house paint.
5. Allow to thoroughly dry at room temperature before use.

### Safety Information

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

### ALUMINUM OXIDE TRAYCOAT SELECTION

When processing HIGH COBALT PARTS (to 27% Co), Al<sub>2</sub>O<sub>3</sub> provides an effective carbon barrier. The Al<sub>2</sub>O<sub>3</sub> also can be used for any Cobalt level as well as for refractory metals and non-Cobalt-containing parts. The Al<sub>2</sub>O<sub>3</sub> coatings often allow several thermal cycles without reapplying more coating.

After applying Al<sub>2</sub>O<sub>3</sub>-based Traycoats, a bed of coarse-grained Al<sub>2</sub>O<sub>3</sub> grit can be spread on top to further prevent sticking and lead to longer-term use of the Traycoat before reapplying.

For LOW COBALT PARTS (to 8% Co) or Rare-Earth-Magnets alloys, see our Titanium Nitride Traycoat paints.

### Specifications

Active Ingredient	Al <sub>2</sub> O <sub>3</sub>
Max Use Temperature	Vac 2732 F / 1500 C Air/Inert 3272 F / 1800 C
Use Atmosphere	All
Fired Composition	100% Al <sub>2</sub> O <sub>3</sub>
Liquid Carrier	Water
Binder Phase	Al <sub>2</sub> O <sub>3</sub>
Brookfield Viscosity (cps)	3500-6800 @4/60
Specific Gravity	1.7
Color	White
Shelf Life (months)	>12
Coverage (ft <sup>2</sup> /gal)	100 to 400
Coating pH	2-3
H F R Ratings	1-0-0
Substrate Use	All

### Sizes and colors

Traycoat AW is a white colored paint.  
Standard Size: 1-gallon wide-mouth Nalgene container

**CAUTION: DO NOT CONTACT WET COATINGS WITH MOLTEN METAL.**

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