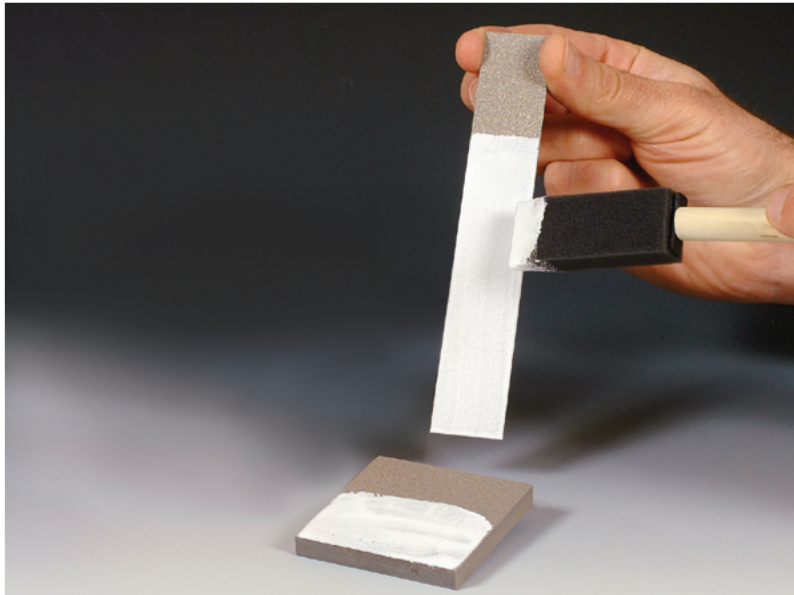
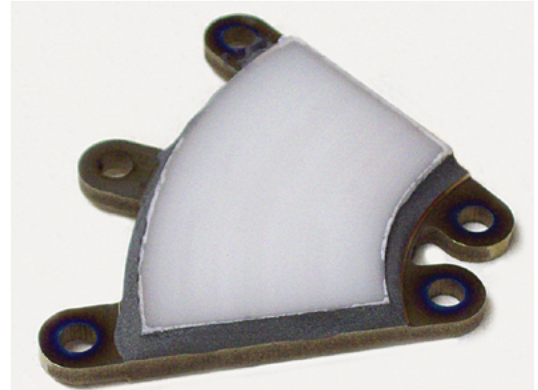


HIGH TEMPERATURE THERMAL SPRAY SEALANTS

Technical Bulletin A5-S3



Ceramacoat™ 503-VFG-C-WHT applied to thermal spray substrate.



Ceramabind™ 542 seals thermal spray on sensor.



CP2000 seals thermal spray on small heater.

PRODUCT HIGHLIGHTS

- 542** Single part, low viscosity, water-dispersed, aluminum phosphate solution for penetrating ultra fine thermal spray applications to 3000 °F (1650 °C).
- 503-VFG-C** Single part, alumina-filled, phosphate-bonded, abrasion and corrosion resistant sealer for thermal spray applications to 3000 °F (1650 °C). Available in the following standard colors:
- | | |
|---------------|--------|
| 503-VFG-C-WHT | White |
| 503-VFG-C-BLK | Black |
| 503-VFG-C-BLU | Blue |
| 503-VFG-C-RED | Red |
| 503-VFG-C-ORG | Orange |
- CP2000** Single part, urethane-based, gloss black, low viscosity, room temperature curing, abrasion and corrosion resistant sealer for applications to 400 °F (204 °C).
- CP2070** Two part, novolac-epoxy with exceptional abrasion and corrosion resistance for continuous operations to 300 °F (150 °C) and intermittent use to 400 °F (204 °C).
- CP4010** Single part, silicone-based, low viscosity, heat-curable, aluminum-filled sealer offering exceptional moisture resistance to 1100 °F (593 °C).



CP2000 seals thermal spray on motor housing.



HIGH TEMPERATURE THERMAL SPRAY SEALANTS

Type	INORGANIC		URETHANE	NOVOLAC-EPOXY	SILICONE
Product Number	542	503-VFG-C	CP2000	CP2070	CP4010
Tradename	Ceramabind™	Ceramacoat™		Corr-Paint™	
Color (cured)	Clear	Assorted ⁶	Gloss Black	Gray	Aluminum
Maximum Temperature, °F (°C)	3000 (1650)	3000 (1650)	400 (204)	300 (150)	1100 (593)
No. Components	1	1	1	2	1
Mix Ratio, by Weight (by Volume)	NA	NA	NA	100:42 (2:1)	NA
Viscosity, cP ¹	35–45	5,000–7,000	200–240	800–1000	200–600
Specific Gravity, g/cc	1.47	2.34	1.05	1.10	1.05
Solids by Weight, %	41.0	76.0	67.0	100.0	44.2
Solids by Volume, %	22.0	53.7	49.0	100.0	41.6
WFT, mils (microns) ²	4.54 (115.3)	1.86 (47.3)	2.00 (50.5)	1.00 (25.4)	2.4 (61.0)
DFT, mils (microns) ³	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)	1.0 (25.4)
Theoretical Dry Film Coverage ⁴ @ 1 mil, ft ² /gal (m ² /liter)	353 (8.7)	861 (21.1)	722 (17.7)	1604 (39.3)	611 (14.9)
Curing, Min Air Set, hrs ⁵	1.0–2.0	1.0–2.0	0.5	8.0	1.0
Curing, Heat Cure, °F, hrs	200, 1 + 500, 1 + 700, 1	200, 1 + 500, 1 + 700, 1	RT, 24 or 250, 1	RT, 24	450, 1 or 480, 0.75
Application Temperature, °F	50–90	50–90	50–90	50–90	50–120
Thinner	Water	503-T, Water	Hi-Flash Naptha	Xylene	Distilled Water
Flash Point, °F/°C	NA	NA	140 (60)	> 200 (93)	> 212 (100)
Volatiles, lbs/gal	0.00	0.00	2.86	0.00	0.86
Shelf Life, months	6	6	12	12	6
Storage Temperature, °F	55–85	55–85	40–80	40–90	55–85

Reference Notes

¹ Viscosity is measure using a Brookfield LV Viscometer; spindle and speed selection vary depending on the product.

² Estimated Wet Film Thickness (WFT).

³ Recommended Dry Film Thickness (DFT).

⁴ Actual coverage will vary depending on material losses during mixing and application.

⁵ Where a value is provided for "Min Air Set", it is recommended to set the coating at room temperature for, at minimum, the specified time prior to curing.

503-VFG-C

⁶ Available in the following standard colors:

503-VFG-C-WHT	White
503-VFG-C-BLK	Black
503-VFG-C-BLU	Blue
503-VFG-C-RED	Red
503-VFG-C-ORG	Orange

Surface Preparation Notes

All surfaces should be free of oil, grease, dirt, corrosives, oxides, paints or other foreign matter. No further preparation is required when coating ceramics, refractories or graphites. Quartz should be sandblasted whenever possible. Smooth metal surfaces should be sandblasted or etched using Aremco's Corr-Prep™ CPR2000.

Abbreviations

NA	Not Applicable
NR	Not Required
DFT	Dry Film Thickness
WFT	Wet Film Thickness

