



ULTRA HIGH TEMPERATURE CERAMIC COATINGS

Technical Bulletin A6-S5



Corr-Paint™ CP3015-AL



Corr-Paint™ CP3015-BL

Aremco's Corr-Paint™ CP3015-xx series coatings are silicate-bonded, ceramic and/or metal-filled, aqueous-based systems that provide excellent resistance to thermal shock, oxidation, and chemical corrosion, with good color stability for applications as high as 1500 °F (816 °C).

These coatings are single-part, fast curing systems that adhere well to carbon and stainless steels, ceramics and refractories. Mainly recommended for interior system protection, several standard colors are provided and custom colors are available upon request.

TYPICAL APPLICATIONS

- Bag Houses
- Boiler Casings
- Ceramic Cloth
- Ceramic Fiberboard
- Chimneys & Stacks
- Heaters
- Heat Exchangers
- Exhaust Systems
- Engines
- Furnaces, Ovens, Kilns
- Rotary Calciners

PRODUCT HIGHLIGHTS

CP3015-AL Aluminum-Ceramic, 1200 °F (649 °C)

CP3015-BL Black Pigmented, 1500 °F (816 °C)

CP3015-GR Gray Pigmented, 1400 °F (760 °C)

CP3015-SS Stainless Steel, 1400 °F (760 °C)

CP3015-WH Off-White, Zirconia Filled, 1500 °F (816 °C)





ULTRA HIGH TEMPERATURE CERAMIC COATINGS PROPERTIES

Product Number	CP3015-AL	CP3015-BL	CP3015-GR	CP3015-SS	CP3015-WH
Color	Aluminum	Black	Gray	Stainless Steel	White
Temperature Continuous, °F (°C)	1200 (649)	1500 (816)	1400 (760)	1400 (760)	1500 (816)
No. Components	1	1	1	1	1
Viscosity, cP¹	250–900	600–900	600–900	200–500	600–900
Specific Gravity, g/cc	1.32	1.54	1.38	1.47	1.37
Solids by Weight, %	36.8	50.0	40.0	42.3	40.0
Solids by Volume, %	19.3	46.3	19.6	41.4	20.6
WFT, mils (microns)²	5.20 (131.9)	2.16 (54.9)	5.09 (129.4)	2.42 (61.4)	4.87 (123.6)
DFT, mils (microns)³	1.0 (25.4)	1.0 (25.4)	1.0 (25.4)	1.0 (25.4)	1.0 (25.4)
Theoretical Dry Film Coverage⁴ @ 1 mil, ft²/gal (m²/liter)	309 (7.6)	742 (18.2)	315 (7.7)	664 (16.3)	330 (8.1)
Primer⁵	NR	NR	NR	NR	NR
Drying	Touch, hrs	1–2	1–2	1–2	1–2
	Handling, hrs	2–4	2–4	2–4	2–4
	Recoat, (min/max), hrs	1/ 24	1/ 24	1/ 24	1/ 24
Curing	Min Air Set, hrs⁶	1	1	1	1
	Cure, °F/hrs⁷	200/2 + 500/1	200/2 + 500/1	RT / 24	RT / 24
Application Temperature, °F	50–90	50–90	50–90	50–90	50–90
Thinner	CP3015-AL-T	CP3015-BL-T	CP3015-GR-T	CP3015-SS-T	CP3015-WH-T
Pot Life, hrs at room temp.	NA	NA	NA	NA	NA
Flash Point, °F (°C)	> 212 (100)	> 212 (100)	> 212 (100)	> 212 (100)	> 212 (100)
VOC's, lbs/gal	0	0	0	0	0
Shelf Life @RT, months	6	6	6	6	6
Storage Temperature, °F	40–85	40–85	40–85	40–85	40–85

Reference Notes

- ¹ Viscosity is measured using a Brookfield LV Viscometer, LV3 Spindle @ 30 RPM.
- ² Estimated Wet Film Thickness (WFT).
- ³ Recommended Dry Film Thickness (DFT).
- ⁴ Actual coverage will vary depending on material losses during application.
- ⁵ Primer is only recommended for exterior applications in which salt fog or moisture are present.
- ⁶ 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.
- ⁷ Curing is recommended but not absolutely required if the system is raised slowly to a minimum of 500 °F within 24–48 hours of application and not exposed to high moisture or rain during this initial dwell period.

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. Smooth metal surfaces should be abrasive blasted to an SSPC-SP10 near white blast. Remove abrasive residue using air pressure; do not clean with organic solvents.

Aremco's Corr-Prep™ CPR2000 is recommended as an alternative when sandblasting is not possible. This is a specially formulated, water-based, zinc phosphate metal etching solution that is non-toxic, non-flammable, non-caustic, and non-corrosive. It etches metal to provide surface profile for superior coating adhesion to aluminum, galvanized metal, steel, and stainless steel. It also helps to improve long-term corrosion protection. Application is simple—just brush or spray liquid on the substrate, allow to sit for 20–30 minutes, then rinse off and dry substrate thoroughly prior to coating.

Application Notes: Mix thoroughly before use to redisperse fillers and pigments. Apply using a brush, roller or spray gun. When spraying, a maximum dry film thickness of 2 mils (0.002") can be achieved by applying two coats. Recommended fluid nozzle diameter is 40–50 mils, atomizing pressure of 40–50 psi, and distance from work of 8–10". Adequate ventilation is required when applying and curing the coating. Read Safety Data Sheet for further safety instructions.

Abbreviations

NA Not Applicable
 NR Not Required or Recommended
 DFT Dry Film Thickness
 WFT Wet Film Thickness
 RT Room Temperature

