AREMCO

HIGH TEMPERATURE SILICONE-POLYESTER COATINGS

Technical Bulletin A6-S2

Corr-Paint™ CP4000-S

Corr-Paint™ CP4040-S

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Aremco's Corr-Paint™ CP40xx-S series coatings are formulated using an advanced silicone-polyester resin combined with inorganic fillers and pigments to offer continuous temperature resistance to 600 °F (316 °C) and intermittent resistance to 800 °F (427 °C).

These coatings are single-part, heat curable systems that adhere to a wide range of materials including metals, ceramics, glass, quartz, and refractories, and offer outstanding resistance to outdoor weathering, UV light, salt spray corrosion, oxidation, detergents, and thermal shock.

PRODUCT HIGHLIGHTS

- Single-Part, No Mixing
- Low Viscosity
- Maximum Use Temperature, 600 °F (316 °C)
- Intermittent Use Temperature, 800 °F (427 °C)
- Bonds to Ceramics, Glass, Quartz, Metals
- Excellent Resistance to Moisture & Salt Spray
- Resists Thermal Shock
- Resists Ultraviolet Light

AVAILABLE COLORS*

CP4000-S Black	CP4060-S Red
CP4010-S Aluminum	CP4070-S Blue
CP4020-S Gray	CP4080-S Yellow
CP4040-S White	CP4090-S Brown
CP4050-S Green	CP4095-S Orange

* All colors are matte finish. The colors represented here are approximate and the actual product color may vary.

TYPICAL APPLICATIONS

- Bag Houses
- Boiler Casings
- Chimneys
- Cyclones
- Ducting
- Heaters
- Heat Exchangers
- Exhaust Systems
- Engines
- Furnaces
- Ovens
- Kilns
- Lighting Fixtures
- Process Vessels
- Reformers
- Scrubbers
- Stacks
- Turbochargers

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HIGH TEMPERATURE SILICONE-POLYESTER COATINGS PROPERTIES

Type		SILICONE-POLYESTER									
Product Number		**CP4000-S**	**CP4010-S**	**CP4020-S**	**CP4040-S**	**CP4050-S**	**CP4060-S**	**CP4070-S**	**CP4080-S**	**CP4090-S**	**CP4095-S**
Color (cured)		Black	Aluminum	Gray	White	Green	Red	Blue	Yellow	Brown	Orange
Temperature Continuous, °F (°C)		600 (316)	600 (316)	600 (316)	600 (316)	600 (316)	600 (316)	600 (316)	600 (316)	600 (316)	600 (316)
Temperature Intermittent, °F (°C)		800 (427)	800 (427)	800 (427)	800 (427)	800 (427)	800 (427)	800 (427)	800 (427)	800 (427)	800 (427)
No. Components		1	1	1	1	1	1	1	1	1	1
Viscosity, cP[1]		400–600	300–400	200–400	300–500	250–350	500–700	150–250	300–500	400–600	550–750
Specific Gravity, g/cc		1.45	1.00	1.42	1.37	1.46	1.47	1.43	1.40	1.45	1.40
Solids by Weight, %		69.9	37.0	62.1	42.1	62.1	62.1	62.1	62.1	62.1	62.1
Solids by Volume, %		57.7	36.7	58.5	49.2	57.4	57.4	59.0	57.7	58.6	58.9
WFT, mils (microns)[2]		1.73 (44.0)	2.73 (69.2)	1.71 (43.4)	2.03 (51.6)	1.74 (44.3)	1.74 (44.3)	1.69 (43.0)	1.73 (44.0)	1.71 (43.3)	1.70 (43.2)
DFT, mils (microns)[3]		1.0 (25.4)	1.0 (25.4)	1.0 (25.4)	1.0 (25.4)	1.0 (25.4)	1.0 (25.4)	1.0 (25.4)	1.0 (25.4)	1.0 (25.4)	1.0 (25.4)
Theoretical Dry Film Coverage[4] @ 1 mil, ft²/gal (m²/liter)		925 (22.7)	589 (14.5)	938.0 (23.0)	789.7 (19.4)	920.3 (22.6)	921.1 (22.6)	946.7 (23.2)	925.6 (22.7)	940 (23.1)	944 (23.2)
Primer[5]		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Drying	**Touch,** hrs	1–2	1–2	1–2	1–2	1–2	1–2	1–2	1–2	1–2	1–2
Drying	**Handling,** hrs	2–4	2–4	2–4	2–4	2–4	2–4	2–4	2–4	2–4	2–4
Drying	**Recoat, (min/max),** hrs	1 / 24	1 / 24	1 / 24	1 / 24	1 / 24	1 / 24	1 / 24	1 / 24	1 / 24	1 / 24
Curing	**Min Air Set,** hrs[6]	1	1	1	1	1	1	1	1	1	1
Curing	**Cure,** °F/hrs[7,8]	450 / 1 or 480 / .75	450 / 1 or 480 / .75	450 / 1 or 480 / .75	450 / 1 or 480 / .75	450 / 1 or 480 / .75	450 / 1 or 480 / .75	450 / 1 or 480 / .75	450 / 1 or 480 / .75	450 / 1 or 480 / .75	450 / 1 or 480 / .75
Application Temperature, °F		50–120	50–120	50–120	50–120	50–120	50–120	50–120	50–120	50–120	50–120
Thinner		PM Acetate	PM Acetate	PM Acetate	PM Acetate	PM Acetate	PM Acetate	PM Acetate	PM Acetate	PM Acetate	PM Acetate
Pot Life, hrs at room temp.		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Flash Point, °F (°C)		118 (48)	115 (46)	115 (46)	115 (46)	115 (46)	115 (46)	115 (46)	115 (46)	115 (46)	115 (46)
VOC's, lbs/gal		3.6	5.3	3.6	3.4	3.7	3.7	3.6	3.7	3.6	3.6
Shelf Life @RT, months		6	6	6	6	6	6	6	6	6	6
Storage Temperature, °F		40–90	40–90	40–90	40–90	40–90	40–90	40–90	40–90	40–90	40–90

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 mixing and 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] Adequate ventilation is required when curing these products as some outgassing will occur.
[8] Curing is recommended but not absolutely required if the system is raised slowly to a minimum of 450 °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-SP6 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 presure 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
DFT Dry Film Thickness
WFT Wet Film Thickness
RT Room Temperature

Refer to Price List for complete order information.