AREMCO

HIGH TEMPERATURE SPECIALIZED COATINGS & SEALANTS Technical Bulletin A5-S1



Corr-Paint[™] CP4050-S1 insulates induction heating coil.

PRODUCT HIGHLIGHTS

Ceramic

512-N Viscous, off-white, electrical insulation paste for circuit breakers, power resistors and solenoids to 2400 °F (1316 °C).

terminal.

Ceramacoat[™] 512-N insulates circuit breaker

540 Medium viscosity, chromium oxide green, phosphate-bonded, high strength, electrical insulation coating for applications to 3000 °F (1650 °C).

Silicone Resin

- 529 Transparent silicone sealers with exceptional electrical and moisture resistance to 800 °F (427 °C). Available in low (529), medium (529-HV) and high viscosity (529-VHV) systems.
- CP4040-S1 Low viscosity, white coating for sealing high temperature electrical wire insulation up to 1100 °F (593 °C).
- CP4050-S1 Low viscosity, green coating for electrically isolating copper induction coils up to 1100 °F (593 °C).

Silicone-Emulsion

- CP4000-FB Low-viscosity black coating for sealing ceramic fiber boards to prevent dusting up to 1100 °F (593 °C). Additional colors available upon request.
- CP4055 Chrome oxide green, electrical insulation coating for use on power resistors for applications to 1100 °F (593 °C).

Silicone-Glass-Ceramic

- SGC4000 Silicone-glass-ceramic, gray, low viscosity, corrosion, flame, and scratch resistant coating 900 °F (482 °C).
- SGC4000-HT Silicone-glass-ceramic, gray, low viscosity, corrosion, flame, and scratch resistant coating 1400 °F (760 °C).



Aremco-Seal[™] 529 transparent high temp sealer.



Cerama-Dip[™] 540 coats high power resistor.



Cerama-Dip[™] 540 coats high power resistor.



Glass-Coat™ SGC4000 applied to thick-film heater.

HIGH TEMPERATURE SPECIALIZED COATINGS & SEALANTS

Туре	CER	AMIC	SILICONE RESIN				
Product Number	512-N	540	529	529-HV	529-VHV	CP4040-S1	CP4050-S1
Tradename	Ceramacoat™	Cerama-Dip™	Aremco-Seal™	Aremco-Seal [™]	Aremco-Seal [™]	Corr-Paint™	Corr-Paint™
Color (cured)	Off-White	Green	Clear	Clear	Clear	White	Green
Maximum Temperature, °F (°C)	2400 (1316)	3000 (1650)	800 (427)	800 (427)	800 (427)	1100 (593)	1100 (593)
No. Components	1	1	1	1	1	1	1
Viscosity, cP ¹	60,000-80,000	15,000–25,000	50–250	1,200–1,600	12,000–14,000	250–500	300–500
Specific Gravity, g/cc	1.98	2.22	1.05	1.09	1.22	1.34	1.36
Dielectric Breakdown Strength, VDC/mil	160	70	> 335	> 430	> 375	833	1250
Solids by Weight, %	75.9	75.0	68.0	74.9	80.0	57.1	57.1
Solids by Volume, %	55.0	48.9	60.9	69.0	75.3	44.4	44.4
WFT, mils (microns) ²	1.82 (46.2)	2.05 (52.0)	1.64 (41.7)	1.45 (36.8)	1.33 (33.7)	2.3 (57.2)	2.3 (57.2)
DFT, mils (microns) ³	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)
Theoretical Dry Film Coverage ⁴ @ 1 mil, ft ² /gal (m ² /liter)	882 (21.6)	784 (19.2)	976 (24.0)	1106 (27.2)	1208 (29.6)	712 (17.5)	712 (17.5)
Curing, Min Air Set, hrs⁵	2-4	1.0	0.5–1.0	0.5–1.0	0.5–1.0	1.0	1.0
Curing, Heat Cure, °F, hrs	200, 2–4 + 350, 1–2 + 500, 1	200, 1–2 + 350, 1–2 + 500, 1	200, 0.5–1 + 480, 0.75–1				
Application Temperature, °F	50-90	50-90	50-90	50-90	50-90	50-90	50-90
Thinner	512-N-T	540-T	MEK	MEK	MEK	PM Acetate	PM Acetate
Flash Point, °F/°C	NA	NA	77 (25)	82 (28)	86 (30)	~118 (48)	~118 (48)
Volatiles, Ibs/gal	0.00	0.00	2.80	2.28	2.00	4.80	4.80
Shelf Life, months	6	6	6	6	6	6	6
Storage Temperature, °F	55-85	55–85	40-90	40-90	40-90	40-90	40-90

Reference Notes

¹ Viscosity is measured 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.

Abbreviations

Surface Preparation Notes

NA Not Applicable

NR

Not Required

DFT Dry Film Thickness

WFT Wet Film Thickness

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 etched and/or sandblasted whenever possible. Smooth metal surfaces should be sandblasted or etched using Aremco's Corr-Prep[™] CPR2000.

HIGH TEMPERATURE SPECIALIZED COATINGS & SEALANTS

Туре	SILICONE	EMULSION	SILICONE-GLASS-CERAMIC		
Product Number	CP4000-FB	CP4055	SGC4000	SGC4000-HT	
Tradename	Corr-Paint™	Corr-Paint™	Glass-Coat™	Glass-Coat™	
Color (cured)	Black	Green	Light Gray	Black	
Maximum Temperature, °F (°C)	1100 (593)	1100 (593)	900 (482)	1400 (760)	
No. Components	1	1	1	1	
Viscosity, cP ¹	150–300	500–1,000	40–80	900–1200	
Specific Gravity, g/cc	1.30	1.35	1.59	1.61	
Dielectric Breakdown Strength, VDC/mil	NA	700	1,000	1,000	
Solids by Weight, %	55.0	55.0	74.0	79.0	
Solids by Volume, %	40.2	38.1	55.5	53.6	
WFT, mils (microns) ²	1.82 (46.2)	2.62 (66.6)	1.80 (45.8)	1.87 (47.4)	
DFT, mils (microns) ³	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)	
Theoretical Dry Film Coverage ⁴ @ 1 mil, ft ² /gal (m ² /liter)	882 (21.7)	612 (15.0)	890 (21.8)	860 (21.1)	
Curing, Min Air Set, hrs ⁵	1.0	1.0	0.25	0.25	
Curing, Heat Cure, °F, hrs	200, 0.5–1 + 480, 0.75–1	200, 0.5–1 + 480, 0.75–1	200, 0.25 + 480, 0.25 + 1000, 0.20	200, 0.25 + 480, 0.25 + 1200, 0.20	
Application Temperature, °F	50–120	50–120	50–120	50–120	
Thinner	Distilled Water	Distilled Water	Ethanol	PM Acetate	
Flash Point, °F/°C	> 212 (100)	> 212 (100)	96 (36)	115 (46)	
Volatiles, Ibs/gal	0.65	0.67	3.50	3.90	
Shelf Life, months	6	6	6	6	
Storage Temperature, °F	55–85	55–85	40–90	40-90	

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