The qualities of

CERAM-A-STAR® 1050

The industry's best silicone-modified polyester coil coating system

AkzoNobel

Product information and specifications for CERAM-A-STAR 1050 high-performance silicone-modified polyester finishes

Product Information

CERAM-A-STAR 1050 is a silicone-modified polyester coil coating system designed exclusively for the metal construction industry. It's the industry's best and strongest SMP coil coating system available, offering superior color stability, chalk resistance, fade resistance and gloss retention. It's proprietary resin formulation provides the backbone for this revolutionary SMP system. It's combined with ceramic and inorganic pigments and other enhancements to our award-winning CERAM-A-STAR 950 system to create the most durable SMP finish available.

This two-coat system, using our High-Performance Primer, provides exceptional durability and offers superior resistance to moisture and UV exposure, with excellent flexibility and abrasion resistance. The unique and highly durable topcoat provides the best color stability and gloss retention of any SMP product.

In fact, the color stability of CERAM-A-STAR 1050 rivals that of 70% PVDF coatings, while offering excellent resistance to dirt pickup and atmospheric stain. Its scratch and abrasion resistance are big bonuses during transit, handling and installation as well – particularly in hot weather. These qualities in particular make CERAM-A-STAR 1050 an excellent alternative to PVDF coatings in certain applications where hot hardness and handling issues are of concern.

CERAM-A-STAR 1050 represents a level of performance surpassing that of all previous silicone-modified polyester finishes. It closes the performance gap with PVDF as it approaches the long-term results of the higher priced coating — while combining the best technological balance of flexibility and toughness.

Field Performance

CERAM-A-STAR 1050 is one component of a total paint system. When applied in accordance to specifications the following field performance can be expected.

	Walls	Roofs
Film Integrity	40 years	40 years
Chalk	No more than #8 for 30 years	No more than #6 for 30 years
Fade	No more than 5 ΔE Hunter units for 30 years	No more than 7 ΔE Hunter units for 30 years

General System Information

CERAM-A-STAR 1050 is approved for use on the following substrates: Hot-Dipped Galvanized (HDG), Galvalume® and Aluminum.

CERAM-A-STAR 1050 is a factory-applied finish that is applied through roll coating to properly cleaned and pre-treated first-quality substrates, and then oven-baked to cure. It is a two-coat system, composed of a topcoat over AkzoNobel's High-Performance Primer.

CERAM-A-STAR® 1050 COOL CHEMISTRY® Series

CERAM-A-STAR 1050 is also available in our COOL CHEMISTRY Series, which contains ceramic infrared reflective pigments. These special pigments are designed to reflect infrared energy while still absorbing visible light energy, thus appearing as the same color yet staying much cooler. When COOL CHEMISTRY coatings are used on metal roofing, the result is a sustainable building material that can lower air conditioning costs, reduce peak energy demand, and help to mitigate urban heat island effects. All of our high-performance coatings for building products are also available in COOL CHEMISTRY versions.

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Application Characteristics

Film Thickness	Topside finish: Primer (dry) = 0.20 – 0.30 mils; Topcoat (dry) = 0. 70 – 0.80 mils; Reverse side finish: Primer (dry) = 0. 15 – 0.25 mils; Pigmented backer (dry) = 0. 30 – 0.40 mils. Total DFT for system = 0. 90 – 1.15 mils. All measurements per ASTM D 5796.
Topside Color	Controlled to the Master Standard by an approved Color Difference Meter or Spectrophotometer, and by visual match under daylight and horizon light of a Macbeth Daylight Booth per ASTM D 1729.

Physical Properties

Specular Gloss	Determined per ASTM D 523 at a glossmeter angle of 60°. CERAM-A-STAR 1050 systems are typically 35% ± 5%, but are available in both higher and lower gloss ranges.
Pencil Hardness	Minimum pencil hardness, per ASTM D 3363, is "F".
Solvent Resistance	Passes minimum of 100 double rubs of a MEK soaked cloth, per ASTM D 5402.
Cross-Hatch Adhesion	No paint removal with Scotch #610 cellophane tape after cross-scoring with eleven horizontal and eleven vertical lines 1 mm apart, per ASTM D 3359.
Impact Resistance	No visible paint removal with Scotch #610 cellophane tape after direct and reverse impact of 80-inch pounds, using 5/8" steel ball on a Gardner Impact Tester, per ASTM D 2794.
T-Bend Adhesion	Per ASTM D 4145, no loss of adhesion when taped with Scotch #610 cellophane tape when subjected to a 2T-Bend.

Testing Data

Humidity Resistance	No blistering, cracking, peeling, loss of gloss or softening of the finish after 1000 hours of exposure to 100% humidity at 100°F ± 5°F, per ASTM D 2247.
Cleveland Condensing	No blistering, rusting or loss of adhesion of the finish after 1000 hours of exposure at 120°F, per ASTM D 4585.
Water Immersion Resistance	Samples immersed in distilled water at 100°F per ASTM D 870 will exhibit no loss of gloss, blistering, cracking, color change or softening of finish after 500 hours.
Salt Spray Resistance	Samples diagonally scored and subjected to 5% neutral salt spray for 1000 hours, per ASTM B 117, then taped 1 hour after removal from the test cabinet with Scotch #610 cellophane tape, exhibit no blistering, no loss of adhesion and scribe creep no greater than 1/8".
Chemical Resistance	No significant color change after 24 hours exposure to 10% solutions of hydrochloric and sulfuric acids, per ASTM D 1308, Procedure 7.2 (spot test).
Kesternich Test	No significant color change after 10 cycles in a SO_2 chamber, per ASTM G 87.
Accelerated Weathering	5 Hunter ΔE maximum color change, and at least #8 chalk rating after 2000 hours exposure, per ASTM G 151 and G 154 using UVA-340 bulbs.
Exterior Weathering	Florida exposure (45º South), 5 Hunter ΔE maximum color change, per ASTM D 2244, and at least #8 chalk rating, per ASTM D 4214, Method A, after 10 years real-time exposure.
Abrasion Resistance	Per ASTM D 968, Method A, CERAM-A-STAR 1050 passes 35 +/- 5 liters/mil of falling sand.
Flame Spread Rating	CERAM-A-STAR 1050 displays a flame spread classification of A (Class 1) when tested in accordance with ASTM E 84.

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AkzoNobel is a leading global paints and coatings company and a major producer of specialty chemicals. We supply industries and consumers worldwide with innovative products and are passionate about developing sustainable answers for our customers. Our portfolio includes well-known brands such as Dulux, Sikkens, International and Eka. Headquartered in Amsterdam, the Netherlands, we are consistently ranked as one of the leaders in the area of sustainability. With operations in more than 80 countries, our 50,000 people around the world are committed to delivering leading products and technologies to meet the growing demands of our fast-changing world.

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