

Ceramic InsulCoat Roof™

Product Description

Ceramic InsulCoat Roof™ is a strong, tough coating, formulated with hollow-core ceramic micro spheres, strands and irregular particulate in a complex 100% acrylic suspension with superior adhesion and abrasion resistance. Provides significant resistance to cracking, chalking, peeling and weathering. Exhibits exceptional adhesive and thermal properties.

Intended Uses

Ceramic InsulCoat Roof™ is ideal for use on wood shakes and shingles, primed galvanized steel, enameled steel, aluminum roofing, cement tiles, clay tiles and asphalt shingles. Although available in thousands of colours, pastels and white are recommended for peak thermal benefits.

Product Data

Characteristics	Test Method	Observation
Weight per US G (3.78L)	FTMS 141 – Method 4184	11 Lbs (4.99Kg)
Non-Volatile Solids	FTMS 141 – Method 4041	By weight: 69.1%
		By volume: 60.9%
Viscosity	FTMS 141 – Method 4281	Stormer Viscosity: 100 revolutions in 8 seconds at 500 grams
Toxicity	FTMS 141 – Method 511	Material is non-toxic & requires no special ventilation during application. Contains no materials considered to be health hazards.
Flammability	ASTM 1360 – DOT-MVSS 302	In container: Non-flammable On concrete: Self-extinguishing – does not support flame spread.
Package Stability		One year + after opening: no settling or other undesirable effects. Materials completely dispersed after stirring
Abrasion Resistance	FTMS 141 – Method 6192 Tabor C17 Wheel – 100 grams – 1000 cycles	Weight loss in grams: InsulCoat Roof with aggregate 41 g InsulCoat Roof without aggregate 14 g Epoxy floor coating without aggregate 9 g (Typical)
Hardness	ASTM D3363	6H – This is the hardest value measured by this test and compares to a typical 2H hardness of hard-wood floor finishes
Impact Resistance	ASTM D2794	28 inch-pounds of impact with no break in the film surface. Typically, 20 inch-pounds of impact is considered to be a high performance test result.
Flexibility	FTMS 141 – Method 6222	Withstood deformation of 1.5” – 38mm to 1/8” – 3.2mm on a metal substrate with no loss of adhesion, cracking, chipping or flaking (mandrel test).

Characteristics	Test Method	Observation
Elongation	ASTM D2370	12 mils – 0.31mm dry film thickness stretched 160% with 100% full memory. This was the full extent of the elongation and the film never did break.
Water Resistance (wind-driven rain)	TTC-555 Water driven against test surface at a dynamic pressure equivalent to 98 mph :	<i>Time for water to penetrate</i> One Coat 6.3 mils 30 minutes Two coats 10.0 mils 11 hours Two coats 12.0 mils none at 24 hours.
Moisture Vapor Transmission	ASTM E96 – Procedure B	20.0 perms • A “perm” is a unit of measure expressing a coating’s ability to allow moisture vapor to pass through the film, or its “ability to breathe”. The lower the “perm” rating, the more likely the coating will blister over time.
High Humidity Resistance	FTMS 141 – Method 6201.1 100% condensing humidity at 107° F – 41.67° C	336 hours with no evidence of film deterioration, blistering or peeling from substrate (250 hours required to pass Federal Specifications).
Salt Spray	FTMS 141 – Method 811.1 100% condensing 5% salt fog at 95° F – 35° C	336 hours with no evidence of film deterioration, blistering or peeling from substrate (250 hours required to pass Federal Specifications).
Artificial Weathering	ASTM E42 – Carbon Arc weatherometer 250 hours equivalent to 5 years	After weatherometer testing (simulated rain, heat, ultra-violet ray and normal weather cycling) the coating showed no evidence of chalking, blistering or peeling, cracking or checking and only slight yellowing of the 100% titanium dioxide white colour.
Fungus Resistance	FTMS 141 – Method 6271	No fungus growth when material tested in an environment of three organisms.

Application Characteristics

Material	Single component, ready-to-use from container with little or no stirring required		
Approximate Coverage	First coat	Rough porous surface	100 to 150 sq. ft./gallon 8.1 to 9.3 sq. meters/3.78L
		Smooth, tight surface	150 to 200 sq. ft./gallon 13.9 to 18.6 sq. metres/3.78L
	Subsequent coats		200 to 275 sq. ft./gallon 20.9 to 27.9 sq. meters/3.78L
Dry Base Film Thickness	One coats Two coats	4 to 6 dry mils – 0.1 to 0.152mm dry film 10 to 12 dry mils – 0.254mm– 0.305mm dry film	
Substrate Preparation	Dry, clean, tight surface with no gloss. – will bridge hairline cracks up to 1/16” – 1.6mm		
Application Temperature Range	39° F – 4° C substrate to 80° F – 29° C ambient air in direct sunlight		
Application Method	1.5” nap roller – brush – airless sprayer (0.023” – 0.584mm tungsten-carbide tip)		

Initial Cure (tack-free)	Air dry, 15 to 30 minutes with moderate to low ambient humidity.
Primary Cure ambient humidity	Air dry, 48 hours at 60° F – 15.5° C or greater surface temperature with moderate to low.
Final Cure	90 to 120 days.
Solvent (before curing)	Water.
Cohesion Strength	Outstanding bond to dry or slightly damp surfaces. Strong cohesion to any clean, dry concrete, masonry, asphalt, brick or wood surfaces. Hydrostatic pressure will disrupt this bond.