Product Data Sheet : Therma Cote®

Révision :16/02/2018
Annule et remplace toute fiche antérieure

CHARACTERISTIC	DESCRIPTION		
Appearance	Creamy Liquid		
Color	Bone White	Color charts available	
Coverage (thickness= 20 mils / 0.5mm)	1,30 m²/liter (24,7m² per Buckets)	*Coverage will vary depending upon substrate, surface texture*	
Density	ASTM D-792	0,41	(g/cm³)
	EN ISO 2811-1:2002	0,622	g/ml
Drying Time	1 to 2 Hours at 21° C & Humidity <60%		
Flash Point	No Flash to Boil		
Maximum Surface Application Temperature	149° C / 300° F		
pH	8,45-9,50		
Solids by Volume	80% ±4		
Specific Gravity	0,594		
Thickness	0,5 mm		
	EN ISO 2808:2007	323,8	pm
Viscosity	2,000-10,000 cps	Using Brookfield viscometer with #3 spindle at 12 rpm	
VOC	VOC Max: European Classification: European Maximum VOC. :	5.3g/L Category A / subcategory c subcategory c : 40g/l	
Weight of Non-Volatiles	43%		
Determination of non- volatile-matter content	EN ISO 3251:2008	54,62%	Min.45
Weight per liter	0,600 kg/ Litre		
	NORME	**RESULTATS**	
Thermal conductivity: λ (lambda)	EN 12667:2002	0,0345 W/mK	
In-situ Energy measurement	EU ISO 9869	Energy Reduced by **38%**	
In-situ measurement of R Value	EU ISO 9869	**R** Value up to **1,87m²K/W**	
In-situ measurement of U Value	EU ISO 9869	**U** Value up to **0,53W/m²K**	
Air Permeance	ASTM E-2178	0,0001 L/(s·m²) at 75 Pa	(0,00002 cfm/ft² at 1,56 lb/ft²)
Flame Spread	ANSI/UL 723	0	
Smoke Developed	ANSI/UL 723	5	
Fire EUROCLASSES (on OSB)	EN 13501-1:2007	D-s2,d0	
Moisture Vapor Barrier	ASTM D-1653	0,0755	
Water Vapor Permeance (Desiccant Method: water vapor from external environment to Structure)	ASTM E-96	207 ng/(Pa·s·m²) ---------- 3,617 perms	Sd = 0,87 m
Water Vapor Permeance (Water Method: water vapor from Structure to external environment)	ASTM E-96	387 ng/(Pa·s·m²) ---------- 6,779 perms	Sd = 1,69 m
Thermal Performance Hot Box	ASTM C1363-11	Increase R value:	Up to 32,4 %
GENERAL PROPERTIES	**TEST METHOD**	**RESULTS**	
Accelerated Aging	ASTM G-53	200 Hours	Passed
Salt spray test	EN ISO 9227:2007	1 500 Hours, without any damage	
Cross Hatch Adhesion	ASTM D-3359	100	

Density (g/cm³)	ASTM D-792	0,41	
Elongation (Elasticity)	ASTM D-882	65%	
Emissivity	ASTM C-1371	0,88 initial (0,86 at 3 year)	
Normal Emittance	ASTM E-408	.94	
Pull Adhesion (Method B-Concrete)	ASTM D-4541	1,447 kPa	209,9 psi
Tensile testing on concrete base	EN ISO 4624:2003	0,78 Mpa	
Pull Adhesion (Method B-Plywood)	ASTM D-4541	1,348 kPa	195,6 psi
Testing on hard metal grid	EN ISO 2409:2007	1	
Bend testing (on cylindrical mandrel)	EN ISO 1519:2003	No cracks or separation of support	
Réflectivity	ASTM C-1549	0,83 Initial	(0,75 at 3 year)
Solar Reflectance Index (SRI)	ASTM E-1980	104 Initial	(77 at 3 year)
Tensile Strength (lb/in2)	ASTM D-882	66,7	
Water Resistance	AATCC 127	No water leakage at 55 cm	
Determination of resistance to moisture (condensation repeated) Metal & Concrete	ISO 11503:1997	64 cycles, No damage to the coating	
change of temperature	EN 60068-2-14:2001	64 cycles, No damage to the coating	
Determination of the effect of heat	EN ISO 3248:2001	7 Hours at 125°C: No change	
Determination of resistance to liquids	EN ISO 2812-1:2007	24 Hours In a gas oil bath: no change	
Rapid-deformation (impact resistance) tests	EN ISO 6272-1:2004	On metal base, Weighing:1kg – 100Cm	Weighing:2Kg - 100 cm
		On concrete base, Weighing:1kg - 100 cm	
Exposure of coatings to artificial weathering	EN ISO 11507:2007	cycle: 8 hours UVla at a temperature of(60 ± 3)'C;4hours condensation at a temperature of(50 ± 3)'C;	100 Cycle: slight yellowing of the film
	NORME	**RESULTATS**	
Permeability Water Vapour	EN ISO 7783	Sd = 1,0m	European Harmonised Standard: **EN 1504-2**
Capillary absorption and Permeability to water	EN 1062-3	0,011 W	
Adhesion Strength by pull of test	EN 1542	1,23Mpa	
Thermal Cycling w/o De-Icing Salt Impact	EN 13687-3	1,11 Mpa	
Carbon Dioxide Permeability		59 (Sd > 50 m)	
Dangerous substances	comply with 5.4		

Certifications et Tests:

Description :

ThermaCote® is a single component spray applied thermal barrier coating encompassed of ceramics and acrylics (water based). This product is easy to apply in new or retrofit construction and enhances the performance of insulation, HVAC Duct Work, Wall Systems, and Roof Systems for all types of substrates including metal, brick, cement block, concrete, wood, or sheet rock. ThermaCote® is MAS Certified Green and UL® Classified as a Class A Fire Retardant with a 0 (zero) Flame Spread. When used as the Primary Thermal Envelope (PTE), ThermaCote® seals the structure and minimizes Solar/Radiant Heat Gain. Lowering built-up heat due to solar heat gain results in lower roof temperatures and reduced cooling costs. ThermaCote® guards insulation against moisture, thermal transfer, thermal bridging, and conduction; it also allows entrapped moisture to escape all of which provides an environment closer replicating the lab conditions where insulation is assigned its "R" value. ThermaCote® is sustainable as it lowers the energy consumption of a structure, prolongs the life of the building materials and adds no harmful VOCs to the indoor or outdoor environment during installation, service or dismantling and recycling.

Application:

Best results will be realized if product is applied using a commercial quality airless paint sprayer (see EQUIPMENT SPEC). Roof applications are best with two coats of 15-20 mils each for total +/- 35 mil DFT (dry film thickness). Allow first coat to dry completely. DO NOT APPLY if temperatures are less than 50º F. Follow the guidelines outlined in the Application Guide for further instruction. Apply the product based on NRCA guidelines and follow all applicable OSHA procedures. Use of proper PPE gear is mandatory, eyewear and respirator as well as sun block is recommended to be used during roof applications. Respirators and proper ventilation required for interior applications. If specific colors are desired please contact ThermaCote, Inc. Interior applications normally require one +/- 20 mil coat. ThermaCote® has excellent performance as a primer/topcoat on many surfaces and substrates.

Surface Preparation

Surface needs to be thoroughly clean and dry; free of dirt, dust, oil, peeling paint and other foreign material. Thoroughly pressure wash area and repair all leaks and cracks. ThermaCote® can be used to repair small cracks and leaks. Rust should be cleaned with a wire brush; use suitable metal primer-sealer where significant amounts of Rust are identified is also recommended. Product can be applied on surfaces from 50° F up to 400° F (10° C-204° C) with special training

Equipment

Professional quality sprayer such as or similar to GRACO 7900, with a pickup of at least 2 GPM/8LPM and tip size based on the application.

Clean Up and Storage

Use warm soapy water to clean tools and spatters. Product should be stored between 4° C-- 48 °C (40° F and 120° F) DO NOT store in direct sun light and protect the product from freezing.

Warranty and Disclaimer

The technical information contained herein is true and accurate at the date of issuance and can be changed without notice. Specific product warranty is available upon request. Specially trained contractors in accordance with ThermaCote, Inc. can provide warranty.

- Roofs: 10 years to Life of the structure (Ask about our Maintenance Program)
- Interior walls, ceilings: Life of the Structure