



# ThermaCote®

SPRAY-APPLIED THERMAL BARRIER  
WATERPROOFING, PRIMER & TOP COAT, ALL-IN-ONE APPLICATION

ADVANCED CERAMIC TECHNOLOGY SAVES ENERGY  
SUPERIOR CORROSION PROTECTION  
FOR COMMERCIAL, RESIDENTIAL, EXTERIOR AND INTERIOR

## THERMACOTE CLIENTS

United States Army  
Coca-Cola  
BASF  
ARAMCO  
ABB  
Samsung C&T  
Exxon  
Shell  
NASA  
Johnson Controls  
United States Navy  
Nestle  
Northrop Grumman  
Princess Cruise Lines  
Dole, Chiquita  
Budweiser Racing  
Dubai Airports Company  
SIKORSKY  
State Farm Insurance  
Thermo King  
AMMROC  
Emirates Airlines  
Baker & Hughes  
Hartsfield International Airport  
UAE Air Force  
GAC Logistics  
Habitat for Humanity  
United States Coast Guard  
Kharafi National  
Atlanta Gas Light Company  
Helmerich & Payne  
Kempinski Hotel  
International Drilling Co  
Ingalls Shipbuilding  
University of Georgia  
University of Mississippi  
Margaritaville Beach Hotel  
Moorehouse College  
Alabama State Department of Education  
HCA Midwest Medical Research Center  
Walker Construction  
XERVON

## RATINGS AND ACCREDITATIONS

Intertek ISO 9001:2008  
UL® Classified  
USGBC Member  
Abu Dhabi Quality & Conformity Council  
Better Business Bureau Member  
CRRC Rated Product  
MAS Certified Green  
US Department of Commerce  
Collaborative for High Performance Schools  
ENERGY STAR Certified Roof Product  
ECRC Rated Product  
ICC-ES International Code Council  
CE EN-1504-2



**tested,  
approved**

## **EU ISO 9869 ENERGY MEASUREMENTS**

Electricity Reduced By 38%

Imperial Unit

Variable R Value to 11

Variable U Value to 0.09 Btu/(h ft<sup>2</sup> ° F)

SI Units

R Value up to 1.87 m<sup>2</sup>K/W

U Value up to 0.53 W/m<sup>2</sup>K

\*Report Available By Request

## **ISO 9001:2008 QUALITY MANAGEMENT SYSTEM**



**Intertek**

## **CALIFORNIA DEPARTMENT OF PUBLIC HEALTH INDOOR AIR QUALITY**

Adds No Harmful VOCs To The Indoor Or Outdoor Environment



# invention and innovation

ThermaCote, Inc. was founded in 1985 to manufacture a durable and energy saving thermal barrier for the construction industry. During the 1970s foam insulation products were used without any real knowledge or understanding about VOCs (volatile organic compounds) and off-gassing chemical fumes within the interior environment. It was decided that the most environmental and economical products could be developed and insulating coatings were the primary objective. The search for better materials led to the creation of a lightweight concrete block that floated on water while maintaining its structural qualities, and this discovery led to the invention of ThermaCote.

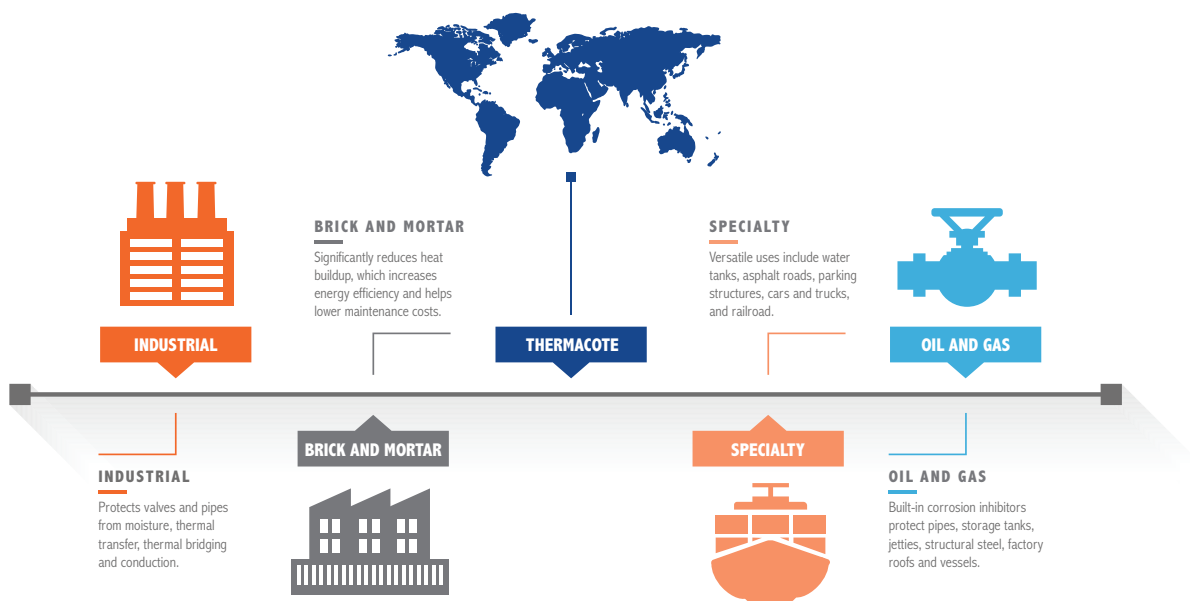
Advanced spray-applied ceramic technology with ultra-low VOCs. Seals the envelope of commercial, residential, interior and exterior structures and saves energy.

**Thermal Barrier**  
**Air Permanence**  
**Breathability**  
**Emissivity**  
**Corrosion Inhibitor**  
**Ultra Lightweight**  
**Ultra Low VOCs**  
**Waterproof**  
**Fire Retardant**  
**Elasticity**  
**Adhesion**

## SERIOUS PERFORMANCE

ThermaCote is a high-performance thermal barrier coating for commercial, residential, exterior, and interior applications. The advanced ceramic technology conserves energy, looks just like flat latex paint when dry, and has ultra-low VOCs (5.3 grams/liter). ThermaCote spray-applied coating is Certified Green to California's standard (DHS 01350) for indoor air quality in classrooms and offices,

an ENERGY STAR qualified product, and is also a CRRC (Cool Roof Rating Council) "Rated" product. With built-in corrosion protection, ThermaCote is the perfect primer or topcoat on new or existing sheetrock, wood, glass, plastic, concrete or steel projects, and helps seal the envelope of any structure. A UL® Classified product with a 0 (zero) Flame spread, ThermaCote is the professional's choice.





## the spray-applied thermal barrier

ThermaCote is a paint-like single component spray-applied water-based acrylic material that incorporates Ceramic Technology. Its ease of application for new or retrofit construction allows for the performance enhancement of insulation of Floors, 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.

ThermaCote is a superior spray-applied reflective thermal barrier which in its simplest definition can be described as an 'energy saving

paint'. When dry, ThermaCote looks just like any flat latex paint, yet it helps to significantly conserve energy. Technically, ThermaCote is a high performance thermal barrier, which incorporates ceramic technology to prevent the transfer of heat (or cold). It also has corrosion protection and control properties in addition to condensation control.

ThermaCote saves energy by boosting the performance level of insulation in Commercial and Residential Buildings. When used as the Primary Thermal Envelope (PTE), ThermaCote seals the structure and minimizes Solar/Radiant Heat Gain. ThermaCote guards insulation against moisture, thermal transfer, thermal bridging, and conduction;

it also allows entrapped moisture to escape. All of this provides an environment close to 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.

**ThermaCote is a high performance thermal barrier, which incorporates ceramic technology to prevent the transfer of heat or cold and minimise solar and radiant heat gain.**

# industrial

ThermaCote incorporates advanced ceramic technology to prevent the transfer of heat and cold and save energy and maintenance costs in industrial applications.

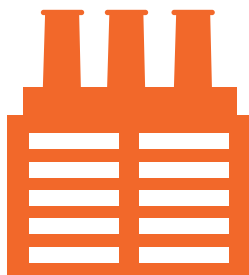


## WAREHOUSES, HVAC, CHILLERS, STEEL, ALUMINUM, STEAM LINES, STEEL BEAMS, FRAMING, STEEL CONTAINERS, SILOS, PIPES, VALVES

ThermaCote is the perfect solution for insulating valves and pipes in an industrial line. For hot applications ThermaCote can be applied while the unit is operational and at temperatures to 149C/300F and with special training up to 210C/410F. Since ThermaCote incorporates corrosion inhibitors, no primer is necessary in most cases.

Industrial applications utilizing ThermaCote are applied in approximately 0.25mm coats, allowing for complete drying before recoating until proper thickness or 'build' is achieved. Without complete drying between coats, moisture encapsulation will ultimately result in product failure. Cryogenic applications must be performed at ambient temperature and fully dried and cured before returning to cold service.

**Protects against moisture, thermal transfer, thermal bridging and conduction, and self primes. Apply directly to freshly blasted steel as well as stainless steel and aluminum.**



**INDUSTRIAL**

### INDUSTRIAL

Protects valves and pipes from moisture, thermal transfer, thermal bridging and conduction.



# brick and mortar

## ROOF AND WALL SYSTEMS, BRICK, CEMENT BLOCK, CONCRETE, WOOD, SHEETROCK, TILES, ASPHALT

On exterior surfaces ThermaCote is a weather barrier, providing additional insulation and a breathability component that allows entrapped moisture to escape. With ThermaCote a building or structure will perform closer to its assigned “R” value throughout its life. On interior surfaces ThermaCote acts as an air barrier sealing leakage and entrapping cold or warm air. This significantly reduces the run time for air conditioners or heaters, produces energy savings, and reduced maintenance costs.

ThermaCote reflective and emissivity attributes will significantly reduce heat build up, increase energy efficiency and reduce maintenance costs. ThermaCote can be used as a waterproofing solution, primer & top coat. ThermaCote will aid in insulation efficiency, reduce application time and costs. ThermaCote will also remove the need to regularly repaint.

The product is non-toxic, environmentally friendly, and approved under the California Department of Public Health’s standard for indoor air quality in classrooms and offices.

**Easy to use ceramic-based insulation (not a “reflective paint”) for new or retrofit construction. Breathability allows entrapped moisture in wall systems to escape. Reduces expansion and contraction, minimizes leaks and damage, and adds life to buildings.**

### BRICK AND MORTAR

Significantly reduces heat buildup, which increases energy efficiency and helps lower maintenance costs.

### BRICK AND MORTAR





# oil and gas

## PIPES, STORAGE TANKS, JETTIES, VESSELS, STRUCTURAL STEEL, FACTORY ROOFS

ThermaCote was the first fluid applied water based coating used to combat CUI (corrosion under insulation) in the mid-80s. With built in corrosion inhibitors ThermaCote can protect fresh blasted steel from 'flash' or surface rust by applying it as a primer & topcoat all in one product. Areas that already have corrosion issues or that are extremely prone will require an additional primer prior to application. ThermaCote has been used in North America for decades to prevent heat loss on industrial pipe systems (oil pipelines) which carry materials that must maintain temperatures at or above 325F/161.5C.

ThermaCote is a product that protects substrates, and personnel from contact burns. As well, this product delivers all of the insulation needed in most cases for piping, tanks and other vessels for temperatures up to 410F/210C in continuous operation while systems are hot.

LNG Gas 'balls' (storage tanks) and all other related equipment can benefit from the lowered surface temperatures which will remain closer to the ambient temperature conditions with ThermaCote. A simple 1-1.5mm thickness is all that is needed to control temperature 'heat gain'. ThermaCote on a substrate controls the temperatures inside a LNG gas system during storage and transport as well.

**Can be applied to surfaces as hot as 410° F/ 210C. No harmful fumes emitted at any point before, during or after application. Flame spread of 0 (zero).**

### OIL AND GAS

Built-in corrosion inhibitors, personnel protection, and consistent flow through piping.



**OIL AND GAS**

## specialty

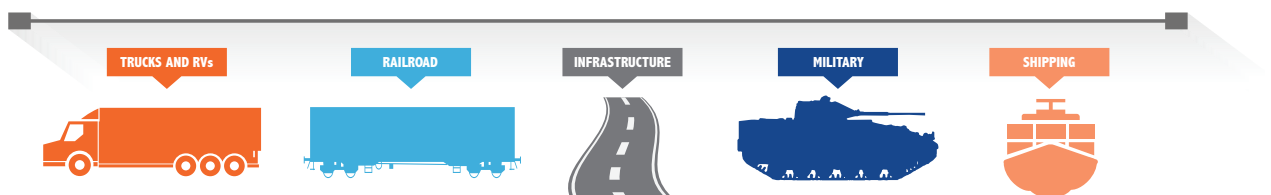
ThermaCote is half the weight of water, has low shrinkage and seals air leaks.



### **COLD ROOMS, WATER TANKS, ROADS, POOL DECKS, TRUCKS, CARS/RACE CARS, BUSES, CAMPERS/RVs, FEED CONTAINERS, RAILROAD CARS, BARN/STABLES, CEMENT DRUMS, INTERIOR BOAT HULLS, PLASTIC, GLASS, SKYLIGHTS**

ThermaCote is versatile and has many different uses, from industrial applications, interior and exterior of buildings and structures, and specialty applications including parking structures, asphalt roadways, refrigeration vehicles, etc. ThermaCote will adhere to all and any other coatings with no special abrading or primers necessary to achieve adhesion.

Rooftop water storage tanks are another specialty application as these surfaces become heated when exposed to light and can have excessive heat build up. Once the sun sets, this heat build up is slowly released back into the surrounding air and environment. This contributes to elevated temperatures in urban areas and increases the demand use of energy to cool surrounding buildings and structures. ThermaCote has excellent traction. The product has been tested to globally recognized traction standards; Australian pool deck, McDonald's slip standard and the international runway standard.



# Product Data Sheet : Therma Cote®

Révision :02/11/2017

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 m <sup>2</sup> /liter (24,7m <sup>2</sup> per Buckets)	Coverage will vary depending upon substrate, surface texture	
Density	ASTM D-792	0,41	(g/cm <sup>3</sup> )
	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	µm
Viscosity	2,000-10,000 cps	Using Brookfield viscometer with #3 spindle at 12 rpm	
VOC	VOC Max:	5.3g/L	
	European Classification: European Maximum VOC. :	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		
	<b>NORME</b>	<b>RESULTATS</b>	
Thermal conductivity: λ (lambda)	EN 12667:2002	0,0345 W/mK	
In-situ Energy measurement	EU ISO 9869	Energy Reduced by <b>38%</b>	
In-situ measurement of R Value	EU ISO 9869	<b>R</b> Value up to <b>1,87m<sup>2</sup>K/W</b>	
In-situ measurement of U Value	EU ISO 9869	<b>U</b> Value up to <b>0,53W/m<sup>2</sup>K</b>	
Air Permeance	ASTM E-2178	0,0001 L/(s·m <sup>2</sup> ) at 75 Pa	(0,00002 cfm/ft <sup>2</sup> at 1,56 lb/ft <sup>2</sup> )
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·m <sup>2</sup> ) ----- 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·m <sup>2</sup> ) ----- 6,779 perms	Sd = 1,69 m
Thermal Performance Hot Box	ASTM C1363-11	Increase R value:	Up to 32,4 %
<b>GENERAL PROPERTIES</b>	<b>TEST METHOD</b>	<b>RESULTS</b>	
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/cm <sup>3</sup> )	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	
Réfectivity	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/in <sup>2</sup> )	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
Exposure of coatings to artificial weathering	EN ISO 11507:2007	On concrete base, Weighing:1kg - 100 cm	100 Cycle: slight yellowing of the film
	<b>NORME</b>	<b>RESULTATS</b>	
Permeability Water Vapour	EN ISO 7783	Sd = 1,0m	European Harmonised Standard:  <b>EN 1504-2</b>
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:





## SPRAY-APPLIED THERMAL BARRIER

Reduces Heat Gain: Saves Energy

Easy Care: Reduces Maintenance Costs

Non-Toxic Easy to Apply: Eliminates Health Risks of Other Insulation Material

