

Leading global insulation coating that's guaranteed to block, shield, protect and insulate!



THE SUPER HERO THAT BLOCKS SOLAR HEAT!

UV • Visual • Infrared

95%
Heat
Blocked



KAPOW
HEAT!

NASA
Tested
Flammability
& Toxicity

SAVE
ENERGY
\$AVE MONEY



High Performance >>> SUPER THERM® Insulation Coating



HIGH SOLAR REFLECTANCE • 99.5% INFRARED BLOCK
MINIMAL HEAT CONDUCTION • NO HEAT LOAD • ECO SAFE

Applying Super Therm® blocks 95% of
solar heat and saves 20-50% in energy use!*

*Industry & Department of Energy USA Tested • Results at neotechcoatings.com



SUPER The Hero that insulates and protects you!

High Performance >>>
SUPER THERM
Insulation Coating

How much energy use is really costing?

Constant efforts go into saving money on power bills, energy efficient appliances, switching off air-conditioning or finding the best solar options. Not too mention dealing with the pure discomfort of heat entering buildings and creating a hot box.

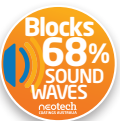
There's also the unseen cost of thermal shock (expansion and contraction of your roof) causing long-term roof damage...**the blindspot in the insulation battle is keeping the heat out by blocking as much UV, Visual and Infrared heat energy at the envelope of the building or structure.**

Super Therm® stops the Aussie heat!

The stakes are high and we know how it feels to struggle with rising power costs. **NEOtech Coatings Australia are authorised distributors of innovative SPI Coatings (USA)**

who have proven globally their success with their advanced insulation solutions that block 95% of solar heat. This ultimately gives you multiple benefits including a return on your investment while protecting you, your assets and the hip pocket.

For over **30 years**, clients globally have **reduced their struggle with heat and energy costs as the high performance range of coatings** from SPI help them deal with many different environmental challenges.



**KAPOW
THE HEAT**

5 Core Benefits of Super Therm®

- 1. World's only insulation coating tested internationally to block 95% of solar** (radiational) heat; Infrared 99.5%, UV 99% & Visual 92% energy!
- 2. Saves you thousands in energy costs** over many years with clients showing ROI within 3 years^
- 3. Proven to last over 30 years with a 20 year Manufacturer's Guarantee***
- 4. Prevents thermal shock** protecting your assets, **reduces fuel consumption, running engine costs, refrigeration and maintenance.**
- 5. Environmentally friendly**, safe and simple water based application approved by the EPA. No fire spread or smoke.



DUBAI

Super Therm® used on the Address Dubai Marina Hotel



USA

Super Therm® used on the Arizona, USA - Tuscon Airport



AUS

Hepburn Springs 12 Shipping Containers home

Nissan Japan saving 75% energy consumption with Super Therm®



JAPAN



Sony Koda Factory, Aichi, Japan: 200,000m²

Application to Nissan Factory	May	June
Before Super Therm® applied	3,767 kW	5,647 kW
After Super Therm® applied	519 kW	1,896 kW
TOTAL KW SAVINGS	87%	67%

Source & Photo: Daiko Shokai, Japan Distributor

Proven, tested outstanding success globally since 1989

*Warranty based on Approved NEOtech Coatings Applicator ^Individual results may vary



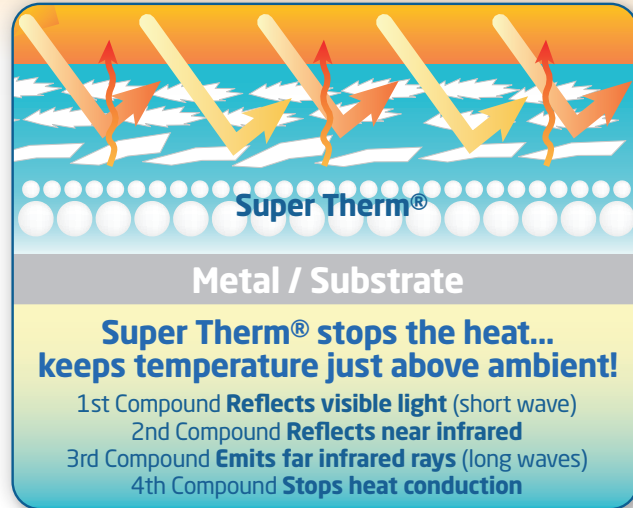
SUPER Proven the Hero for over 30 Years Globally

High Performance >>>
SUPER THERM
Insulation Coating

How Super Therm® Works

Formulated 4 ceramic coating that has been tested globally and block 95% of Infrared, UV and Visible heat energy!

KAPOW
THE HEAT



STOPS 99.5% Infrared Heat

SRI 102
Reflectivity 83%
Emissivity 90%
BTU 99.5%
ASTM E1461-92

Super Therm®'s insulation leading technology

J.E. Pritchett is the President of SPI Coatings, USA. He's a Ceramic researcher and formulator, holding a Bachelor of Science from the University of Arkansas and Paint Technology courses from University of Missouri along with Graduate studies performed with NASA in Huntsville, Alabama, USA and Ceramic Materials research over the past 30 years. He is also the inventor of **Super Therm®** along with many other innovative industrial coatings.

J.E. worked with NASA engineers and spoke at the NASA new technologies symposium in Chicago in 1995 as a ceramics specialist where he is leading in his field worldwide. **While many companies mention NASA, SPI Coatings and Super Therm® has been developed and tested by NASA!**

Super Therm® contains four natural ceramic compounds from over 7,000 available. Three match each of the solar radiation waves (UV, IR and visual) to block their heat. The fourth ceramic has a density 50 times lighter than paper that the heat cannot physically load into the surface. This creates high emissivity and reduces conduction...acting like sunscreen on the roof and walls.

This is why the surface of **Super Therm®** is no more than a few degrees over ambient in any climate as it blocks 95% of the heat. There's no heat load, so no heat absorbed and transferred even when the surface is dirty. It passively keeps performing!

No 'R' value for Super Therm®

Finding the ceramic compounds that will continue to insulate when formulated into a coating is the result of 30 years of research and development. The individual compounds that do insulate are combined in a technologically advanced formula to form a matrix that blocks radiation waves which achieves a reduction in "heat loads". This type of insulation technology does not have an 'R' rating because the heat never loads. You must load heat "before" you can calculate 'R' ratings which is simply the measurement of 'resistance' or how fast the heat is being transferred through a bulk insulation material.

SRI isn't the full story

Check the Solar Reflective Index and emissivity tests when considering other reflective paints. **Super Therm®** stops IR heat with a 99.5% BTU test. It doesn't have the highest SRI rating but stops most of the heat and has been tested in the USA, Japan and Russia*. **Can other coatings stop infrared heat like that?**

30 year test site still going strong

Field testing since 1989 in Kansas, USA by Japanese researchers shows only a 10% reduction in the performance of **Super Therm®** after 30 years in blocking heat load. The test location has undergone 30 years of sun, sand, ice, snow and rain with very little effect. Unlike many others, the coating film also shows no tears, cracks, flaking, lifting, separating, or loss of adhesion. It continues reducing corrosion protection. Reducing thermal shock also offers the additional benefits of extending the lifespan of the roof with fire protection. **Super Therm® best under the sun!**



Above: J.E. Pritchett, President of SPI demonstrates a 1090°C blow torch in his hand showing emissivity in the **Super Therm®** compounds >



Note: All claims made in this brochure are proven with laboratory testing world wide. Visit: <https://neotechcoatings.com/super-therm-testing-and-results/>

SUPER The Hero aims to protect our environment

High Performance >>>
SUPER THERM
Insulation Coating

Easily reduce your footprint!

Industries, government and residents globally rely on **Super Therm**® due to its unique and outstanding high performance and sustainability results and benefits. The core properties of **Super Therm**® continue to attract smart customers needing a genuine and long term eco-friendly insulation solution that yield passive energy efficiency, reduces CO₂ emissions and reduces costs. Super Therm stopping the BTUs entering buildings means less cooling needs!

Super Therm® the proven leader!

EPA Energy Star Program

Super Therm® is an approved and accepted Energy Star Partner

- ASTM E 903-96 Reflectivity=80%
- Only 1% loss in reflectivity over 3 Years (3% over 10 years)
- ASTM C 1371 and C 1549 Solar Reflectance and Thermal Emittance
- Tested to maintains thermal efficiency for 30 years

CRRC (Cool Roof Rating Council)

Rated Products Directory: Field-Applied Coating. CRRC Product ID# 0802-0001

LEED - Leadership in Energy & Environmental Design

Cradle to Cradle Silver Certification

Environmentally Safe and Eco-effective

SPI - Member U.S. Green Building Council

Why roof colours matter with heat

Dark roofs can attract 25% more heat than white roofs due to emissivity. While dark roofs may blend into the environment better, they **increase the temperature more in your building!**

As energy prices and temperatures rise you'll need to consume more energy to remain cool, therefore it costs you more. **Black or dark coloured surfaces absorb more heat energy and magnify the temperature more** than white roofs, sometimes **reaching 80°C+ on a hot day with no heat barrier.** This heat is transferred into the building where fibreglass insulation loads the heat and air conditioners work hard to keep up...eventually its all overloaded!

Solar panels are able to create more input credits with **Super Therm**® blocking heat and reducing need on air conditioning.

Super Therm® blocks 95% of that heat at the best place, the envelope, leaving near ambient temperatures. This creates a very energy efficient building that also has the roof protected from thermal shock and corrosion and reduces urban heat loading effects.



LOW CO₂
EMISSIONS



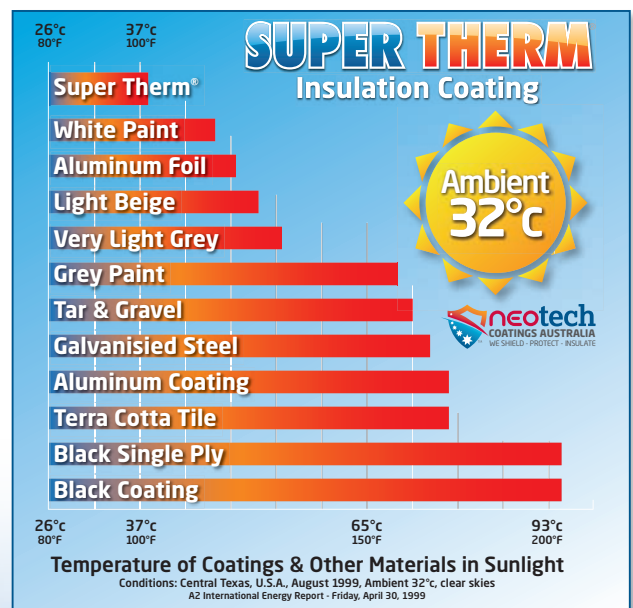
Super Therm® passively reduces CO₂ emissions

Certified and Tested



LEED LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN

Super Therm® has been proven for 30 years to save you energy by blocking heat. These savings reduce CO₂ & costs



COOL, TOUGH, PROVEN INSULATION COATING FOR AUSTRALIA'S HOT SUMMERS AND HIGH ENERGY BILLS!



Global Projects = Hero Solutions

High Performance >>>
SUPER THERM
Insulation Coating

Super Therm® is transforming the planet with its success!

Many national organisations and governments around the world apply and use Super Therm® and other SPI's coatings. Whether it's a house, factory, farm or truck...Super Therm® has you covered with cases studies all over the globe!

Global Savings

55% energy savings

Cumming New Life Church, Cumming, GA, needed help with high electric bills coupled with cooling units running all the time and inside temperatures not going below 25°C (78°F). Atlas Air and Heat Inc. performed a CHVAC load calculation and found 22.8 tons of cooling were needed yet the existing system could only produce 15 tons. **Super Therm®** was applied on the existing metal roof.

The power bill from September previous year showed 11,320 kWh's used vs. September next year usage of 5,200 kWh's. **The cooling tonnage was re-tested at 16.97 tons from 22.8 tons. The church reduced their energy use by 55% and the amount of cooling needed by 26%.**

50-60% utility savings

Temperatures in **Las Vegas** average 43.3°C in July (summer). Adobe Homes coated the roof and walls with **Super Therm®** of a home and report up to 50-60% savings on the total utility bill. The house maintains temperatures not over 27°C without air conditioning.

20-50% energy savings

Industry testing with the Florida Energy Conservation Assistance Program after applying **Super Therm®** records moisture block and air flow reduction as well as a **20-30% energy savings on homes** (hot humid climates) and in Denver (dry climates) as well as steel containers in Texas finding **46-52% energy savings!**

40% air conditioning savings

Super Therm® was applied to 34,800m² of the **Tucson International Airport**, it saw a **22% reduction in total energy usage** (lighting, elevators, food facilities, etc) and a **40% reduction in air conditioning costs.**^

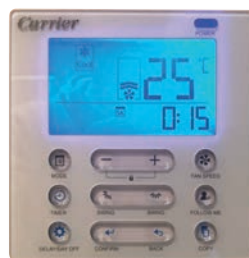
Global Companies Using Super Therm®

- Mitsubishi
- Nissan
- Sony
- Panasonic
- General Dynamics
- Hoover Dam
- HEB Grocery Company
- Major Oil Firms - Worldwide
- Trucking & Transportation
- Halliburton Company
- Vodafone Group PLC
- Home Builders
- U.S. Army
- U.S. Air Force
- U.S. Navy
- ...and many more



Save 39% more energy at 25°C

Con Edison, NY research stated "keep your thermostat set at 78°F (25.5°C) when your building is occupied...turning down the thermostat to 75°F (23.8°C) costs 18% more, and 72°F (22.2°C) costs 39% more!"*. Therefore BTU Reduction = Kw savings = actual dollar savings...keeping out as much heat load as possible saves money and energy use.
Super Therm blocks heat therefore less energy to cool!



40% of total building energy costs directly relate to air conditioning expenses and use
Beat the heat build-up with Super Therm®

Trucks & Reefers using Super Therm® Denver to Phoenix, USA

Cool-down time was cut by **1.75 hours or 44%**
Extend the life of the refrigeration trailer units
20% less fuel on the outbound "hot" haul
29% less fuel on the return "cold" leg



Visit
neotechcoatings.com
for more savings
and case studies



*ARISTA Air Conditioning Corp: aristair.com/blog/15-tips-to-keep-your-energy-bills-from-skyrocketing-this-summer/
^ neotechcoatings.com/coating-products/super-therm-insulation-coating/super-therm-case-studies/

Energy Savings Guide

High Performance >>>

SUPER THERM

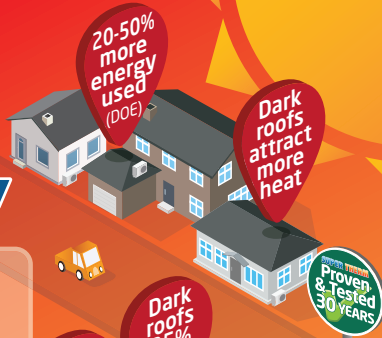
Insulation Coating

1

IDENTIFY

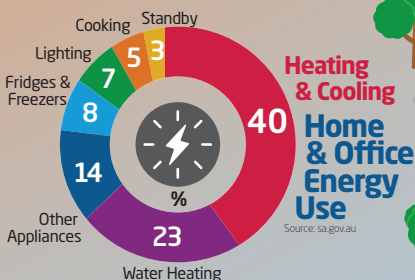
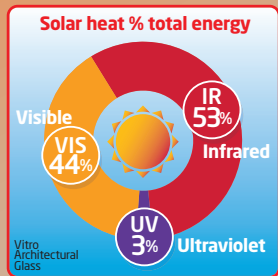
40% of energy used at home and office is cooling and heating. Rising power costs & hotter summers are inevitable! 93% of radiant heat comes through your roof. Consider stopping the heat!

Rising power costs & hotter summers are inevitable! 93% of radiant heat comes through your roof. Consider stopping the heat!



CHOOSE 2

Many insulation choices fall short of what Super Therm® Insulation Coating provides. Compare 20-50% saving in energy use (DOE), 99.5% BTU heat block, lasts 30 years, eco friendly, no maintenance!



PREPARE 3

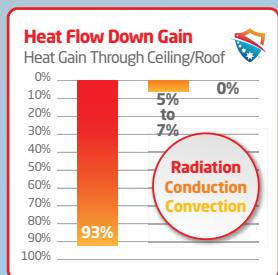
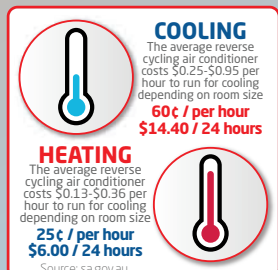
Contact NEotech Coatings for more information and we'll help you understand all the ins and outs. Quote, agreement, invoice and get ready to apply, save energy and save money!



4

APPLY

Qualified applicators pressure clean your roof and apply Super Therm® insulation coating that starts to work instantly to passively block 95% of heat!



A 3°C reduction in the thermostat produces a 39% reduction in utility costs.
Con Edison, NY.

REWARDS 5

Super Therm® brings years of passive insulation benefits. It's also saving money, much cooler in summer and warmer in winter with less energy used! Contact us today!
neotechcoatings.com



SUPER

The Hero Tested; still the Best!



High Performance >>>
SUPER THERM
Insulation Coating

Super Therm® is a proven insulation coating solution

Super Therm® and other SPI coatings have been tested in labs across the world along with successful global field testing. From NASA, Japan, Russia, Saudi Arabia, Australia and much more, its proven consistently outstanding results for 30 years.



Super Therm® Application

Preparation

The surface must be clean from all dust, oil, tar, rust, grease, salts, films or any contaminants. Power wash minimum of 3000 psi. Surface must be completely dry before applying. Recommend drop sheets and caution as Super Therm® is difficult to clean up if spilt due to its bonding strength.

Mixing

Due to its thick ceramic compounds Super Therm® is best mechanically mixed or mixed by hand (boxing) thoroughly for a minimum of 5 minutes, then apply.

Application

Super Therm® can be applied by brush, roller or sprayed. The preferred method of application is by air or airless sprayer. Remove filters from the sprayer and apply on a day with no wind. See and search neotechcoatings.com for airless sprayer instructions.

Spread & Coverage Rates

Super Therm® should be applied at no less than 17 mil wet = (425um Microns) and dries down to 10 mil = (250um Microns) after each application.

The total Dry Film Thickness (DFT) is a quarter of a mm (business card thickness) at 250um Microns. Recommended coverage is 2.5m² per litre.

Note: Roofs with corrugations

2" corrugation = roof size x 135%

2.5" corrugation = roof size x 145%

3" corrugation = roof size x 160%

Application Temperature

Maximum Surface Temp. when applying: 65°C (150°F)

Minimum Surface Temp. when applying: 5°C (40°F)

Maximum Surface Temp. after curing: 149°C (300°F)

Drying and Cure Times

First coat: 30-60 minutes to tack free at 21°C

Overcoat: 2 hours later at 21°C at 40% relative humidity

Full Cure: 21 days

Note: If Super Therm® is wet or rained on during the curing process it may bubble. Do not puncture bubbles as the coating will settle down and retract to normal.

Clean Up

After completion tools should be cleaned with water; cleaned brushes and rollers can be reused.

Storage

Store between 5°C and 37°C and thoroughly close the container to air tight as Super Therm® will dry out.

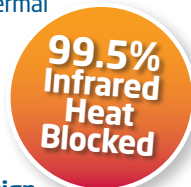


Colours and Tinting

Super Therm® is a pearl white colour. It can tint to any earth-tone colours yet will lose its effectiveness. **Not medium to dark tones.** Never tint to grey-black as the tint will cover the ceramic particles first and block their effectiveness. Best approach is to apply Super Therm® in 2 coats, let dry, then paint a light coloured paint it as your finishing coat. Anything darker than 40% grey should have HSC® Coating applied underneath.

Test and Certifications

- **UL** (Underwriters Laboratory) approved
- **Flame Spread Test** (ASTM E84; 0 smoke, 0 flame)
- **NASA:** NHB 8060.1B/C Test 1 **Flammability testing "0" Burn, Class "A" rating,** NHB 8060.1C, Test 7 Toxic Off gassing
- **UV & Salt Spray Resistance** (ASTM 5894) 5000 hours
- **USDA Approved**
- ASTM C236: **Fiberglass Batt insulation comparison**
- **Flexibility** (ASTM E1737): 180 deg. bend - passed
- **Perm Rating** (ASTM E96): 8.8 average
- **Abrasion Resistance** (ASTM D4060): 3,000 cycles
- **Resistance to Wind Driven Rain** (ASTM E514)
- **Department of Energy USA - ECAP-CUL-1-03 - Energy Conservation Assistance Program** - Standard Method for Comparing Utility Loads in Standard Constructed Buildings. Director, Alexander Othmer. **FEO Energy Conservation Assistance** / USF Tampa, Florida
- **ICC Approval** (International Code Council) Legacy Report #21-25. ICC consolidates approvals for: **BOCA** (Building Officials Code Administrators)
- **EPA Energy Star Program:** Approved and accepted as an energy star partner for saving energy
 - ASTM E 903-96 Reflectivity=80%
 - Only 1% reduction in Reflectivity in 3 Years (3% 10 yrs)
 - ASTM C 1371 and C 1549 Solar Reflectance and Thermal Emittance
- **CRRC (Cool Roof Rating Council)**
Rated Products Directory: Field-Applied Coating, CRRC Product ID# 0802-0001
- **LEED - Leadership in Energy & Environmental Design**
- Qualifies Sustainable Sites Credit 7.2 Heat Island Effect
- **United States Department of Agriculture - USDA**
Environmentally safe and safe for use around animals



Visit: neotechcoatings.com - Search 'testing' for the full range of Super Therm® tests.

SUPER

The genuine Hero 21st century Solution?

High Performance >>>
SUPER THERM
Insulation Coating

At NEotech Coatings we understand the struggle with the rising power costs, more energy use and rising environmental temperatures.

As summer's get hotter you can protect yourself with **Super Therm® high performance insulation coating** tested and proven to **stop 95% of heat**, including **Infrared**. This reduces your air conditioner running, power costs and saves money. **In fact the US Department of Energy ran three separate tests showing Super Therm® brought an energy saving of 20-50%*.**

Industries cannot rely on unsustainable energy efficiency when delivering their products and systems. That's why **NEotech Coatings with SPI Coatings** are working hard for you to have outstanding energy solutions. **Super Therm® has proven to reduce heat and last over 30 years!**

We bring peace of mind to combating high energy use and associated costs. Transformation across all industry sectors including Government, business, trucking and transport, cool and cold storage, homes, schools and much more! Contact us today to start blocking the heat!



**Superior Products International
Global Distributors and Product
Applications for 30 years**



Super Therm® Physical Data

- **Solids:** By w/w 70% / By v/v : 54% (+/-2%)
- 30-60 minutes to tack free at 21°C (70°F)
- **Overcoat:** 2 hours when 21°C (70°F) at 40% Relative Humidity
- **Full Cure by Evaporation:** 21 days
- Lead and chromate free
- USDA approved and permitted for use for potable water
- **Weight: 1.42kg/litre** (11.88 lbs./gallon)
- **Shelf Life:** Up to 5 years if unopened under appropriate storage conditions (See SDS).
- **Vehicle Type:** Urethane/Acrylic blend
- **VOC Level:** 67.2 grams/litre 0.561 gal/lbs
- **Acid resistance:** Will withstand mild acids
- **Viscosity:** 105 - 110 KU
- **pH:** 8.5 - 9.0
- **Apply:** 17 mils (425 microns) wet

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THE HEAT!**

**STOPS
99.5%
Infrared
Heat**

**SRI 102
Reflectivity 83%
Emissivity 90%
BTU 99.5%
ASTM E1461-92**

Visit neotechcoatings.com for full Material and SDS pdfs



NEotech Coatings Australia Pty Ltd are Authorised Australian Distributors of Superior Products International (SPI) USA

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