

Contex Thermoguard

Thermal insulation for buildings
in hot climates



Better for your building and the environment

A heat reflecting exterior coating designed specifically for large buildings, homes and other structures in hot Middle Eastern climates, Contex Thermoguard helps you reduce your building's internal temperature and minimise its carbon footprint.

Air conditioning is one of the main sources of energy consumption in the Middle East and, in most buildings, the sun's infrared rays are the single largest contributor to internal heat gain. Based on next generation heat reflecting technology, Contex Thermoguard reflects the sun's infrared rays to reduce internal heat gain and improve internal comfort.

As lower temperatures inside mean less reliance on air conditioning, applying Contex Thermoguard to the outside of your building is one of the simplest ways to reduce energy consumption and improve your building's carbon footprint.

Better for building users

- Proven to reduce energy bills by 5 per cent.
- Cuts building cooling time.
- Reduces indoor temperatures by 5 °C.
- Available in a wide range of colours and shades, including black.

Better for the environment

- Lower energy use and emissions due to reduced air conditioning use.
- Reduced urban heat island effect.
- Low VOC and free of hazardous materials.
- Long-lasting coating for increased product lifecycles.

Good to know

The urban heat island (UHI) effect is a growing concern for cities in the Middle East. As the number of buildings increases, average temperatures in urban areas are on the rise, which leads to a drop in air quality and may contribute to global warming. Contex Thermoguard helps mitigate UHI by ensuring buildings reflect more sunlight and absorb less heat.

Greener solutions for a better tomorrow

Contex Thermoguard is part of our Purearth sustainability concept. At Hempel, we want every layer of our paint to make the world that little bit greener, and Purearth is our commitment to being at the forefront of green building technology. Products produced under the Purearth umbrella not only protect the building they are applied to, but also enhance its environmental performance or improve its internal atmosphere. Of course, they also contain no dangerous substances and are produced in factories that are safe for the environment.

A robust exterior coating for the ultimate thermal insulation

As an advanced exterior, Contex Thermoguard provides excellent thermal insulation and an extremely long-lasting finish in hot climates.

When applied to the exterior of a building, Contex Thermoguard reduces internal heat gain from walls and roofs to help keep the interior cool and reduce reliance on air conditioning. And, like any other Hempel product, it is designed for easy application and results in a long-lasting and beautiful finish.

A breathable, elastomeric waterborne topcoat, Contex Thermoguard uses an advanced pure acrylic binder to ensure excellent anti-carbonation properties and crack-bridging ability.

Available in more than 500 colours, including black and grey shades, Contex Thermoguard can be applied with roller or spray, as well as textured rollers for a range of effects and finishes. It provides high scrub resistance, outstanding UV resistance and weather stability, and gives you a finished coating that looks great and requires minimal maintenance.

Environmental performance

- Unique thermal insulation properties.
- Proven energy-saving capabilities.
- Waterborne coating.

Low maintenance and long life

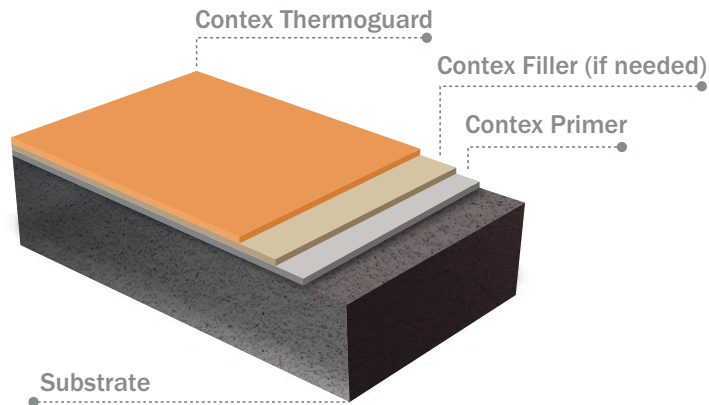
- Excellent anti-carbonation and anti-fungal properties.
- Lower heat cycling stress.
- Outstanding UV resistance and weather stability.

Beautiful finish

- Wide range of pastel, medium and dark colours.
- Can be applied with textured rollers.

Simple application

- Standard roller or spray application.
- Dry film thickness of 40 microns.
- Dry to touch in 3 hours at 20°C.



Proven to reduce energy consumption in the Middle East

In the Middle East, electricity is an increasingly valuable commodity and there is a growing need to reduce electricity consumption. Reducing reliance on air conditioning units is one of the most effective ways of doing this.

A third-party energy saving study used energy simulation software to assess heat gain and energy use in a typical five bedroom villa. The study analysed the thermal effects of solar energy on a villa with a conventional exterior coating compared to a villa with Contex Thermoguard. The effects were clear.

Abu Dhabi	
Annual energy consumption reduction	4.7 %
Annual cooling load reduction	8 %
Annual peak cooling load reduction	6.7 %
Total reduction in CO ₂ per year	4,101 kg

Kuwait	
Annual energy consumption reduction	2.1 %
Annual cooling load reduction	6 %
Annual peak cooling load reduction	3.6 %
Total reduction in CO ₂ per year	3,368 kg

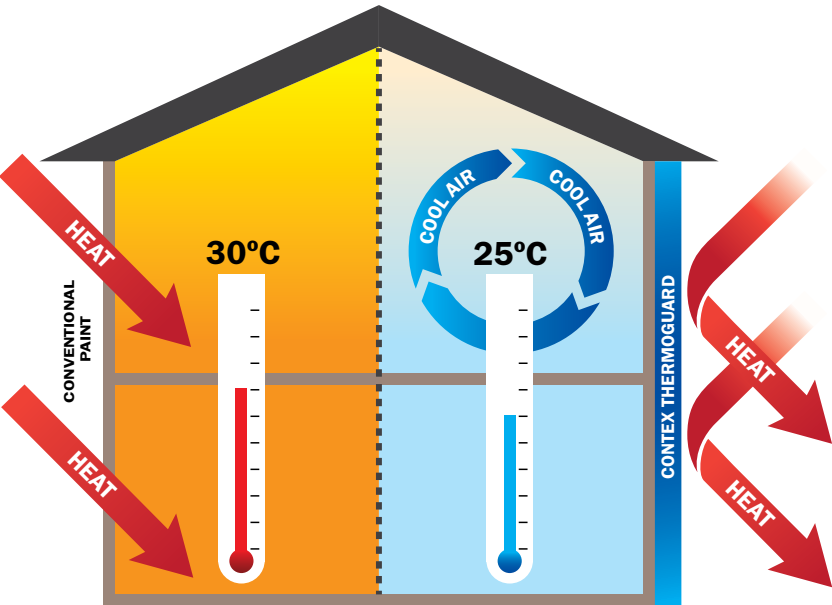


The study was performed by WSP | Parsons Brinckerhoff. For full details of the study, please contact your Hempel representative.

How does Contex Thermoguard work?

Infrared energy is responsible for 53 per cent of the sun's heating effect, which makes reflecting infrared rays one of the most effective ways to reduce internal temperatures.

Contex Thermoguard's unique formulation combines heat reflecting pigments and glass microspheres to reflect solar energy, especially energy in the infrared spectrum. This significantly reduces heat transfer into indoor areas, which reduces average indoor temperatures by 5 °C, and reduces dewing to improve the coating's durability.



Thanks to the combined effect of heat reflecting pigments and glass microspheres, Contex Thermoguard increases the total solar reflection by more than 100 per cent compared to conventional coatings. This significantly reduces the transfer of heat into indoor areas, which reduces average indoor temperatures by 5 °C and cuts cooling time and cost. As a result, Contex Thermoguard can reduce a building's energy consumption by 5 per cent.

Certifications

Contex Thermoguard meets all relevant local and international standards.

Contex Thermoguard has been tested by third-party laboratories and holds 20 quality and performance certificates, including:

Property	Standard	Performance
Solar Reflective Index (SRI) testing ⁽¹⁾	ASTM E903(1996)	112(SRI)
Colour retention ⁽²⁾	IS 8709	Passed
QUV 'A' accelerated weathering after 1,000 hours ⁽³⁾	ASTM G 151	No other cracking, chalking, blistering or crazing observed
Anti-carbonation ⁽³⁾	BS EN /1062-6:2002 (TP50/05/13569)	CO ₂ Diffusion Coefficient 8.93 x 10 ⁻⁸ cm ² s ⁻¹
Flexibility ⁽²⁾	ASTM D522-93a	<ul style="list-style-type: none">No sign of lifting, wrinkling or disintegrationNo cracking, peeling or loss of adhesion observed in the dry film
Water resistance ⁽²⁾	ASTM D 1735	<ul style="list-style-type: none">No blistering or wrinklingNo evidence of softening or loss of adhesion after drying
Adhesion ⁽³⁾	BS EN 1542:1999	3.27Mpa

(1) Performed by Atlas Weathering Services (DSET Laboratories)
(2) Performed by Wimpey Laboratories
(3) Performed by Technology Centre (UK)

	Contex Thermoguard 58620
Finish	Silk
Colour/shade	Refer to Contex colour card for exterior
Volume solids	50 +- 2 %
Theoretical spreading rate*	12.5 m ² /litre – 40 microns*
Specific gravity	1.25 kg/litre

*Dependant upon DFT, substrate and the relevant consumption factor.



Since 1915 Hempel has been a world-leading coatings specialist, providing protection and inspiration to the world around us. Today we have over 5,500 people in 80 countries delivering trusted solutions in the protective, decorative, marine, container, industrial and yacht markets. This includes many recognised brands like Crown Paints, Schaeppman and Jones-Blair.

Hempel is proudly owned by the Hempel Foundation, which supports cultural, humanitarian and scientific causes across the world.

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