C-COAT™– is a liquid waterproofing and thermal insulation coating made from microscopic, ceramic balls and air filled silicon balls. The ceramic balls are suspended in water, latex and acrylic polymers mixture.

The heat transfer coefficient of C-COAT™ (1.29 – 2.2 W/m² K) is much lower than for other construction and thermal insulation materials (9.0-23.0 W/m² K).
The thermal insulating effect of C-COAT™ applied in a 1.0mm thick layer (2 x 0.5mm) gains 40% and is the equivalent of that of 100mm of rockwool or 100mm of polyurethane foam.

## C-COAT™ Thermal conductivity comparison

| MATERIAL NAME | THERMAL CONDUCTIVITY FACTOR [W/mK] |
|---|---|
| **C-COAT™** | **0.0017- 0.0030** |
| Fibre insulating board | 0.048 |
| Glass wool insulation | 0.040 |
| Gypsum board | 0.170 |
| Classic insulation material | 0.035-0.160 |
| Kapok insulation | 0.034 |
| Rock wool insulation | 0.045 |
| Plastic foam insulation | 0.030 |

## C-COAT™ Technical Specification

| DESIGNATION | CHARACTERISTIC |
|---|---|
| Packaging | Tight sealed plastic bucket |
| Packaging volume | 10, 20 and 100 L |
| Colour | White (RAL 9003 Signal White) |
| Coat thickness (layer) | 0.5 mm dry |
| Base | Water-based acrylic |
| Chlorides | None |
| Weight | 0.5 kg/L |
| Elongation | Above 600% |
| Transmittance | 0 |
| Hardness | Shore “A” (ASTM D2240-05) |
| Density | 249 kg/$m^3$ (ASTM D1622-98) |
| Elasticity | 46.48 MPa (ASTM D638-99) |
| Thermal conductivity | 0.0017 – 0.0030 W/mK (ASTM C518-10) |
| Solar reflective index (medium wind conditions) | 104.85% (ASTM E1980:11) |
| UV Reflection | 100% |
| Vapour permeability | 0.003% |
| Water absorption | 0.001% |
| Tensile strength (adhesion) concrete | 1.09 N/mm (ASTM D4541-95) |
| Tensile strength (adhesion) steel | 0.81 N/mm (ASTM D4541-95) |

| | |
|---|---|
| Tensile strength (adhesion) brick | 1.33 N/mm (ASTM D4541-95) |
| Combustibility | Incombustible |
| Application temperature tolerance | -20°C to +250°C |
| Operation temperature tolerance | -60°C to +400°C |
| Drying time to degree 3 at + 20°C | 60 min |
| Transportation temperature | +5°C to +45°C |
| Resistance of a covering to impact of difference of temperatures -40°C up to +180°C | No changes |
| Application method | Airless sprayer, brush, roller |
| Abrasion resistance | High |
| Shelf-life of the material | Up to 1 year from date of manufacture |
| Service life | Thermal engineering – 15 years.<br>Protecting substrate – > 20 years |
| Top-coating for specific application | Contact supplier |