

**Product Description**

Lockwell C-Coat Standard is an easy to apply ceramic beaded coating designed to insulate the substrate to which it is applied. It is a high-solids, thin-film insulating coating that can be used internally or externally and non-flammable.

The combination of the ceramic beads and the distribution of sizes to fill as much of the volume as possible means that it has exceptional insulation properties. It provides both reflective and insulation performance, in a fraction of the thickness of other common insulation materials.

**Features**

- Excellent thermal insulation
- Non-hazardous
- No toxic vapours
- Minimal odour
- Can be applied to surfaces up to 150°C with special technique, 90° with normal application
- Withstands constant substrate temperatures up to 200°C constant, 260° peak (max 2hrs)
- Seamless
- Flexible at low temperatures, can withstand constant temp of -60°C
- Excellent UV resistance
- Easy to apply in difficult areas with brush or roller
- Can provide energy savings of 40% or more at as little as 0.5mm thickness

**Application Area**

- Roof Insulation
- Defence
- Power Plants
- Refineries
- Roof Insulation
- Defence
- Power Plants
- Refineries
- Fire trucks
- Cold Storage Facilities
- Food Processing Plants
- Shipping containers
- Hot water systems
- Pipe insulation
- Industrial and Manufacturing Facilities
- Hot surface touch protection
- Worker comfort in sheds

**Typical Wet Properties**

Material Property	Value
Density, cured (kg/L)	0.38-0.41
Density, wet (kg/L)	0.47-0.59
Mix ratio (by volume)	Single Pack
Solids (mixed) by volume	~80%
Theoretical Coverage	1mm thick = 1.25L over 1m <sup>2</sup>
Max thickness per coat	0.5mm DFT (0.63mm WFT)

**Technical/ Performance Data**

Heat conductivity at 20°C	0.001-0.003 (W/mK)
Minimum Surface Temp for application	10°C
Skin Time (substrate and ambient temp dependent)	~40min @ 25°C & 50% RH
Recommended minimum recoat window (substrate and ambient temp dependent)	12 hours
Maximum Recoat Window	NA
Elongation, ASTM412-C	>65%
Pull-off adhesion (Most substrates)	1-1.5 MPa min
Constant Service Temperature	-60 to 200°C+
Peak Service Temperature (Short Duration)	260°C
Water vapour permeability	0.001 mg/mPa
Reflectance	>83%
Application temp range	10-150°C

For other properties that may be of interest contact your distributor.

**Application Guideline**

**Introduction**

The coating is single pack and can be applied using any airless sprayer capable of maintaining a pressure of at least 100 bar (1500psi) with 33:1 ratio or greater (i.e. Graco Ultramax II 595 or better). A 523 tip is recommended for most applications, although it will spray through 19- 27thou tips of various fan widths.

Thoroughly mix the product using a jiffy mixer at no more than 300rpm.

Add up to 3% by volume water to improve consistency if the product has started to lose moisture and consistency. More may be added in hot, dry conditions to assist with sprayability and maintaining consistency in the hopper/pail.

If there is dried or crusty product in the pail we recommend straining it through a 30-60mesh strainer prior to spraying. Generally, machine and gun filters should be removed. If the tip is clogging, a 30mesh machine filter should prevent further clogging. Spray pressure should be maintained between 600-1200psi, any higher and cracking of the finished film may occur due to damage of the microspheres.

If the coating is applied too thick, alligator cracking can occur.

**Cure Time and Recoat Time**

Development of a full cure may take up to 7 days. Material maybe recoated after 24hours at 20-25°C temperatures, less at higher temperatures.

**System Specification****Surface Preparation**

Remove all grease, oil, dust and other contamination.

*Steel* – Clean to Sa2 to ISO8501-1 minimum

*Concrete & Ceramic* – Remove dust, oils, grease and other contaminates. Dampen the substrate before application.

*Wood* – Remove dust, resins and other contaminates from the surface.

*Plastic & Plasterboard* – Sand surface, dust and degrease as required.

**Primer**

Generally, a primer is only required for substrates above 60°C. The primer should be a watered down version of C-Coat. The amount of clean water to add depends on the temperature of the substrate. Generally, start with 50-90% C-Coat in water. Too lumpy means not enough water, bruising means too much water. Do trial patches to determine the correct mix.

For ambient substrate temps, just do a mist coat and allow to dry for 30min or more before applying the first full coat.

**Recommended Thickness**

Contact your distributor for the recommended thickness based on the insulation value required. Generally, 0.5 mm DFT is used for basic house and shed insulation, and 1mm minimum for pipes and processing plant. The thicker the product the better the insulation properties.

**Number of Coats**

Apply the product in no more than 0.63 mm WFT coats (0.5 mm DFT).

**Top Coat**

Most common house paints, aliphatic urethanes, etc. can be painted over the C-Coat to give the required colour/impact resistance. If the product is to be used in an exposed environment, particularly where water ponding may occur, a waterproof topcoat is recommended such as C-Coat HyPho.

**Typical Service Life**

Life expectancy for the C-Coat is >15years for most applications.

**Storage and Handling Precautions**

The product should be kept properly closed and stored indoors in a well-ventilated area under normal factory conditions. Storage at room temperature (20-35°C) also provides a convenient viscosity for handling.

Storage at low temperatures (below 10°C) is not recommended. This material must be protected from frost.

**Packaging**

Standard 20L Pails. Other sizes may be available on request.

**Additional Information – Disclaimer**

The information provided herein, especially recommendations for the usage and the application of our products, is based upon our knowledge and experience. Due to different materials and equipment used, as well as varying working conditions and environments beyond our control we strictly recommend carrying out intensive trials to test the suitability of our products with regard to the required processes and applications. This data sheet is provided free of charge and we do not accept any liability with regard to the above information or with regard to any verbal recommendation, except for cases where we are liable of gross negligence or false intention.