

TERMOREFLEXIVE COATING CLIMATE SYSTEM® ROOF

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|--------------------|-------------------|--------------------|
| ✓ Reflects UV rays | ✓ Hydrophobic | ✓ Washable |
| ✓ Incombustible | ✓ Ecological | ✓ Vapour permeable |
| ✓ Cost-saving | ✓ Hydro isolation | ✓ Colour fast |

DESCRIPTION

Climate System® Roof is highly efficient, energy-saving, flexible coating, made from a water-based pure acrylic resin system filled with vacuumed sodium borosilicate ceramic micro spheres of less than 100 microns in size. Each micro sphere acts as a sealed cell and the entire mastic acts as a thermally efficient blanket covering the entire structure. This coating is non-toxic, friendly to the environment, and form a monolithic (seamless) membrane that bridges hairline cracks. It is completely washable and resists many harsh chemicals. Climate System® Roof has high reflectance and high emittance as well as a very low conductivity value. Climate System® Roof greatly reduces thermal shock and heat penetration by keeping roof surfaces much cooler in hot summer weather. The coating offers UV protection and low VOC's. It displays excellent dirt pick-up resistance and retains its flexibility after aging. Climate System® Roof reduces noise transmission and has an effective use range from - 40°C (-40 F) to +205°C (400 F).

PHYSICAL PROPERTIES

Reflectivity - 89%, Emissivity - 94%,

Unlike typical contact insulation, where heat conduction is slowed down, Climate System® technology reflects heat. Sunlight only produces heat if it is absorbed by a surface. In the reflectance of incident sunlight, heat is radiated back into the atmosphere as infrared light, but not as heat. The radiative process leaves less than 2% of the radiant energy absorbed at the surface as heat. The Climate System® coating, applied even in a thin layer, has a very low conductivity value, and therefore it can be compared with the properties of insulating materials.

TYPICAL USES

Primarily used as a roof coating where joints, seams, cracks and gaps around protrusions are reinforced with a 100% polyester spun laced fabric embedded in the membrane. It may be utilized wherever a weather resistant membrane-like coating is required. Climate System® Roof is used in most climatic conditions.

PRIMER

Use the recommended system primer.

SURFACE PREPARATION

All surfaces must be clean and free from laitance (efflorescence), dust, dirt, rust, oil and grease. Minimally, surfaces must be cleaned to remove any loose or chipped paint, or any other foreign material prior to coating.

COLOURS

White and any custom colour available. Darker colours will give a correspondingly lower reflectivity.

SPECIFIED MINIMUM DRY FILM THICKNESS - COATING MEMBRANE

Flat roofs: 700 microns DFT (27 Mills) at any location.

Steep or sloped roofs: 300 microns DFT (12 Mills) at any location.

V.O.C.

39.5 grams / liter

THEORETICAL COVERAGE (2 Coats)

1 l - 0,8 m² 700 microns DFT (27 Mills DFT)

1 l - 1,8 m² 380 microns DFT (12 Mills DFT)

DRYING TIME

To set: approximately 20 minutes

To re-coat: at least after 4-5 hours

Complete drying: approximately 12 hours

Drying time at 24°C (75°F) and 50% relative humidity

Application is allowed at temperatures between +5°C to 25°C for a period of 24 hours.

Caution: Do not apply Climate System® Roof coating if rain is imminent or likely to occur before the coating dries, or if a temperature drop below 4°C is expected.

FLEXIBILITY

The coating remains flexible from -45.6°C to +204.44°C, preventing damage caused by thermal shocks.

ADHESION

Excellent adhesion for a wide range of substrates: wood, polyurethane foam, galvanized steel, aluminum, asphalt roof shingles, concrete, asbestos, and many others.

WATER RESISTANCE

Outstanding water resistance.

Water permeation after 50 hours.....40-55 mg/m²

Permeability (ASTM E 96-80)08.80% Perms

Film Swelling (at equilibrium)10.17%

THINNING

None required. Clean water in small amounts of up to 0.24 Liter (1 cup) per gallon may be added to replace evaporation losses or to adjust for spray equipment configuration.

EQUIPMENT

Roller or airless spray application is recommended. Very small areas may be brushed. When Climate System® Roof coating is applied by brush, three (3) coats cross brushed are required for adequate protection.

Airless Sprayer:

Tip Orifice: .031 inches

Atomizing Pressure: 2200 – 2500 psi

Fan Spread: 60 Degrees

Pump: Minimum 1 gallon per minute at 2500 psi

Filter: Remove filters and screens

Prime pump with water before attempting to spray Climate System Exterior.

Acceptable equipment includes: Binks Super Hornet, Graco 433 or larger, and many others.

VARIABLE PERMEABILITY

This function, unique to Climate System®, allows the membrane to perform unlike other coatings. Under dry conditions, polymers contract, and pores open to release trapped water vapors from the substrate. However, under wet conditions (rain, water levels, etc.), polymers swell, pores close, and the entire membrane becomes waterproof.

RECOMMENDED VALUES PER ONE COAT (1 millimeter = 1000 microns)

	m ² /l	WFT(microns)	DFT(microns)
Recommended	9	371 (15 mills)	233 (10 mills)
Maximum	12	275 (11 mills)	175 (7 mills)
Minimum	6	567 (23 mills)	350 (14 mills)

These values allow for a 10% tolerance.

MIXING

Thoroughly mix each container/pot with low-speed mechanical agitation to prevent unwanted foaming.

NUMBER OF COATS

Two to three applications (minimum dry film thickness of 700 microns DFT for flat roofs and roofs with asphalt insulation, and 300 microns for steep roofs) will provide the best long-lasting protection at a minimal cost. The primary cause of coating failure is standing water in areas with low film thickness (e.g., less than the recommended thickness).

APPLICATION METHOD

To ensure adequate and uniform coverage, it is recommended to apply each coat in a consistent (same direction) manner to prevent "rippling" and other irregularities on the substrate. Climate System® Roof roof coating should be applied in complete and uniform layers.

CLEANING

Clean tools and equipment with warm soapy water. Rinse with clean water; flush mineral spirits through spraying equipment to prevent corrosion and lubricate material and seals.

PACKAGING

19 liters

STORAGE

Store at a minimum of 1°C (34°F) - maximum 30°C (86°F).

Caution: Protect from freezing!!!

SHELF LIFE

Minimum 2 years (protect from freezing)

FLAMMABILITY

Class I - Non-flammable (water-based) Not regulated

PRODUCT WARRANTY

10 years