

# CHEMFIT ROOFCOAT 700

**Flexible, Liquid Applied, Single Component Acrylic Based Waterproofing and Heat Reflecting Membrane – For GI Roofs, Metal Roofs & Non-Trafficked Areas**

## PRODUCT DESCRIPTION

**ChemFit RoofCoat 700** is a flexible, liquid applied, single component acrylic based waterproofing and heat reflecting membrane specifically formulated for metal roofing applications. This premium elastomeric coating cures to form a seamless, durable, and highly reflective membrane that protects against water ingress, UV degradation, and thermal cycling. The heat reflecting properties help reduce surface temperatures, minimizing thermal expansion and contraction while contributing to energy savings. Ideal for GI roofs, metal roofs, and other non-trafficked exterior surfaces.

## PRIMARY APPLICATIONS

**ChemFit RoofCoat 700** is recommended for use in conditions such as:

- Waterproofing of GI (galvanized iron) roofs and corrugated metal sheets
- Sealing and restoration of aged metal roofing systems
- Reflective cooling coating for metal roofs in hot climates
- Waterproofing of asbestos cement sheets and non-trafficked roof areas
- Sealing of roof seams, fasteners, penetrations, and flashings on metal roofs
- Protection of concrete, brickwork, and cement sheet roofs (with appropriate primer)

## KEY FEATURES AND BENEFITS

- **Single component** – Ready to use; no on-site mixing required
- **Heat reflecting** – High solar reflectance reduces surface temperature and energy costs
- **Elastic and flexible** – Excellent crack bridging capability accommodates roof movement
- **Seamless membrane** – Forms a joint-free, waterproof barrier
- **Excellent adhesion** – Bonds strongly to metal, GI sheets, asbestos cement, and concrete
- **UV resistant** – Withstands prolonged sun exposure without degradation
- **Breathable** – Allows trapped moisture to escape while blocking liquid water
- **Water based** – Low VOC, environmentally friendly, easy clean-up
- **Mildew resistant** – Resists fungal growth and discoloration
- **Easy to apply** – Brush, roller, or airless spray application
- **Available in 18 kg plastic bucket** – Convenient size for roof projects

## PHYSICAL AND CHEMICAL PROPERTIES

Property	Specification
Appearance	Viscous liquid
Color	White (other colors available on request)
Basis	100% acrylic elastomer (water based)
Density	1.3 – 1.5 kg/L
Solids by weight	> 60%
Solids by volume	50 – 55%
VOC content	< 50 g/L (Low VOC)
Viscosity	85 – 141 KU (brush/roller/sprayable)
Touch dry (at 25°C)	2 – 6 hours
Recoat time (at 25°C)	6 – 24 hours
Full cure	7 days
Application temperature	+5°C to +40°C
Service temperature	-30°C to +90°C

## MECHANICAL PROPERTIES

Property	Value
Tensile strength	> 250 psi (> 1.7 MPa)
Elongation at break (initial)	> 300%
Elongation at break (weathered)	> 125%
Crack bridging	> 2 mm
Adhesion to metal/concrete	> 2.0 N/mm <sup>2</sup>
Permeance	< 15 perms
Low temperature flexibility	Pass @ -18°C (0°F)
Accelerated weathering (1000 hrs)	No cracking, no chalking
Fungi resistance	Zero rating (pass)

## PACKAGING AND STORAGE

Property	Value (White)
Solar reflectance (initial)	0.85 – 0.87
Solar reflectance (3 year aged)	0.74
Thermal emittance (initial)	0.89 – 0.90
Solar Reflectance Index (SRI) – initial	110
Solar Reflectance Index (SRI) – 3 year	92

## PACKAGING AND STORAGE

### Packaging:

- 18 kg plastic bucket

### Storage:

- Store in original sealed containers at +10°C to +32°C
- Protect from direct sunlight, moisture, and freezing
- Store in dry conditions
- Keep containers tightly closed when not in use
- Allow material to reach room temperature (24 hours) before use

**Shelf life:** 12 months from date of manufacture when stored properly

## DOSAGE AND COVERAGE RATES

**Consumption per coat:** Approximately 1.0 – 1.5 kg/m<sup>2</sup> (typical wet film thickness 0.5 – 0.8 mm)

### Typical coverage per 18 kg bucket:

Application	Coverage
Single coat	12 – 18 m <sup>2</sup>
Two coat system (recommended)	6 – 9 m <sup>2</sup>

### Recommended system thickness:

- Minimum 2 coats for all applications
- Total dry film thickness: 0.5 – 1.0 mm (depending on substrate and exposure)
- For seams and fasteners: apply at higher rate (1.5 kg/m<sup>2</sup>) with fabric reinforcement

**NOTE:** Coverage is approximate; varies with substrate porosity, surface profile, application method, and number of coats. Metal roofs require less material than porous concrete surfaces.

## APPLICATION GUIDELINES

### Surface Preparation:

- Substrate must be clean, dry, sound, and free from dust, oil, grease, loose rust, old coatings, and any contaminants
- Metal roofs: remove loose rust; wire brush or pressure wash; tighten loose fasteners
- Repair any damaged areas; replace corroded sheets if necessary
- Seal seams and fasteners with compatible sealant or a brush-grade coating prior to full application
- For new/clean metal surfaces, apply compatible primer (consult ChemFit technical support)

### Mixing:

- Stir thoroughly before use (product may separate during storage)
- Do not thin or dilute – use as supplied
- For spray application, ensure material temperature is at least 25°C

### Application:

- Apply first coat by brush, roller (1-1/4" nap synthetic), or airless spray
- For seams and fasteners: apply first coat at higher rate (1.5 kg/m<sup>2</sup>), embed fabric (if required), then apply second coat
- Apply second coat crosswise to the first coat after first coat is completely dry (minimum 6-24 hours)
- On bare metal roofs, ensure complete coverage to prevent rust formation
- Maintain wet edge to avoid lap marks
- Do not apply when rain is expected within 24 hours

### Curing:

- Protect from rain, dew, and mechanical damage for minimum 24 hours
- Acrylic coatings cure by water evaporation – do not apply in high humidity (>90%) or when dew point is less than 5°F below ambient
- Full water resistance after 7 days
- Do not apply below +5°C or if temperature will drop below +5°C within 24 hours
- Do not apply when substrate temperature exceeds +49°C (120°F)

## HEALTH AND SAFETY

Acrylic coating may cause mild eye and skin irritation. If eye contact occurs, rinse with water for 15 minutes and seek medical attention if irritation persists. For skin contact, wash with soap and water. If swallowed, do not induce vomiting; rinse mouth and drink water, then seek medical advice. Use gloves, safety glasses, and protective clothing during handling. Ensure adequate ventilation when using in enclosed spaces. Refer to the Safety Data Sheet for detailed information.

## CLEANG OF TOOLS

Clean all brushes, rollers, mixing equipment, and spillages with soap and water immediately after use before coating dries. Dried material requires mechanical removal. Dispose of cleaning materials in accordance with local regulations.

## APPROVALS AND STANDARDS

**ChemFit RoofCoat 700** conforms to the following standards:

- **ASTM D6083** – Standard Specification for Liquid Applied Acrylic Coating Used in Roofing
- **ASTM D6083 Table 2** – Film Physical Property Requirements for Acrylic Roof Coatings
- **ASTM C836** – Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane
- **ASTM D4541** – Pull-off adhesion strength testing
- **ASTM D1653** – Permeance testing
- **ASTM D522** – Low temperature flexibility (mandrel bend)
- **ASTM D4798** – Accelerated weathering (QUV)
- **ASTM G21** – Fungi resistance testing
- **ASTM D2240** – Shore hardness testing
- **ASTM D412** – Tensile strength and elongation testing (metals)
- **ASTM E96** – Water vapor transmission testing
- **ASTM G154** – Accelerated weathering
- **UL 790** – Class A fire rating (for complete roofing system)
- **Factory Mutual (FM)** – Approval for wind uplift (system dependent)
- Low VOC compliant (< 50 g/L) – **LEED v4** applicable
- **ISO 9001** – Quality management system certified

## LEGAL NOTES

*All technical data provided in this Product Data Sheet is based on laboratory testing under controlled conditions. Actual field performance may vary due to differences in substrates, application methods, site conditions, and environmental factors. ChemFit makes no warranty of merchantability or fitness for a particular purpose. Users shall conduct their own trials to validate product suitability for the intended application. ChemFit reserves the right to modify product specifications without prior notice. For the most current documentation, request the latest Product Data Sheet and Safety Data Sheet from ChemFit.*

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