WATERPROOFING MEMBRANES

SealForce AC540-W

ONE-PART WATER-BASED ACRYLIC ROOF WATERPROOFING MEMBRANE

Rayson SealForce AC540-W is a one-part, water-based acrylic liquid membrane, applied cold and straight from the pail by brush, roller or airless spray. It dries to a seamless, elastic film that stays exposed on roofs, old roof tiles and external walls: resistant to UV, mould and fungus, and permeable to water vapour.

KEY PROPERTIES

- One-part and water-based — applied cold, no heat or flame
- Resistant to UV exposure — stays exposed without a top coat
- Elongation ≥180% (ASTM D412); crack bridging over 2 mm
- Tensile strength ≥2.5 N/mm²; adhesion ≥1.5 N/mm²
- Permeable to water vapour; resistant to mould and fungus
- No blistering, cracking or delamination after 1,000 h weathering
- Supplied in a range of colours



Illustration — single pack. Pack size: see this data sheet.

MIX	COVERAGE	RECOAT	ELONGATION	PACK SIZE
Ready to use	~0.68 kg/m²	4–8 h	≥ 180%	20 kg
one part	per coat at 0.5 mm WFT	between coats	ASTM D412	pail

01 RECOMMENDED USES

- Roof waterproofing in new construction and refurbishment
- Waterproofing of external walls
- Waterproofing and renovation of old roof tiles
- Roofs with many details: penetrations, drains, roof lights and complex geometry

02 SUITABLE SUBSTRATES

- Concrete and cementitious surfaces at least 28 days old, mechanically prepared
- Brick and stone with sound, flush-pointed mortar joints
- Ceramic and roof tiles, securely fixed and pressure-washed
- Metal, abraded bright and primed against corrosion
- Timber roof decks and sound existing coatings, after a trial area

03 SYSTEM ROLE

RAYSON SEALFORCE AC540-W — SECOND AND THIRD COATS	About 0.68 kg/m² each
POLYESTER REINFORCING FLEECE	Bedded into the wet first coat
RAYSON SEALFORCE AC540-W — FIRST COAT	About 0.68 kg/m²
RAYSON SEALFORCE AC505-W — PRIMER	On a sound, clean, dry substrate

Figure 1 — Typical system build-up (top to bottom). Layer thicknesses are system-dependent; confirm the specification for your project.

Technical data & application controls

Control the substrate, the weather, the film build and the drying of each coat.

SOURCE TECHNICAL DATA

SURFACE PREPARATION	Sound, clean and dry, free of dust, loose and friable material, oil, grease, laitance and coatings that are not firmly bonded. Prepare concrete mechanically; new concrete at least 28 days old. Fix loose roof tiles, replace broken ones and pressure-wash. Abrade metal bright and prime it against corrosion. Repair defects first and let repairs cure; prime with SealForce AC505-W.
MIXING / DILUTION	One part, ready to use — apply directly from the pail.
APPLICATION METHOD	Soft-bristle brush, short-pile roller or airless spray.
COVERAGE	Approximately 0.68 kg/m² per coat at 0.5 mm wet film. A 20 kg pail covers about 29 m² per coat: about 14 m² at two coats or 9 m² at three, before allowances for porosity, profile and wastage.
APPLICATION CONDITIONS	Air and substrate +8 °C to +40 °C; relative humidity at most 80%; at least 3 °C above the dew point. Substrate moisture at most 6% by weight, with no rising moisture.

CONDITIONS, PACKAGING & STORAGE

DRYING & CURING	Apply one coat at a time. Protect each coat from rain, damp and condensation until it has dried; drying takes longer where air movement is restricted.
RECOAT INTERVAL	4–8 hours between coats; at least 2 hours after bedding the reinforcing fleece.
FILM / THICKNESS	Roof coating: two coats. Reinforced roof waterproofing: three coats with polyester fleece bedded into the first, overlaps at least 50 mm. Each coat about 0.5 mm wet film.
PACKS & COLOURS	20 kg pail. White, grey, green, clay brown, brick red, tile brown, red and black; other colours on request.
STORAGE	Original unopened packaging, dry, between +5 °C and +30 °C.
SHELF LIFE	12 months from the date of production.
PERFORMANCE DATA	Shore A hardness ≥70 (ASTM D2240). Tensile strength ≥2.5 N/mm² and elongation at break ≥180% (ASTM D412). Tensile adhesion ≥1.5 N/mm² (ASTM D7234). Crack bridging over 2 mm, passed (ASTM C836). No blistering, cracking or delamination after 1,000 hours of weathering (ASTM G154).

04 APPLICATION WORKFLOW



Figure 2 — Application workflow. Each stage is a hold point: confirm the previous stage is complete and within specification before proceeding.

Specify, apply and verify the system

SITE VERIFICATION

Protect each coat from rain, damp and condensation until it has dried. Not for roofs with long-term ponding water, and not a wearing surface for pedestrian traffic.

05 RECOMMENDED SYSTEM

Roof coating (two coats)

1. Prepare the surface: sound, clean and dry, defects repaired
2. Prime with Rayson SealForce AC505-W; let it dry clear
3. Apply the first coat of Rayson SealForce AC540-W at about 0.68 kg/m²
4. After 4–8 hours, apply the second coat at right angles to the first

Reinforced roof waterproofing (three coats)

1. Prepare, prime with AC505-W; detail upstands, outlets, penetrations
2. Apply the first coat and bed the polyester fleece into it while wet; allow at least 2 hours
3. Apply the second coat at about 0.68 kg/m², at right angles to the first
4. Apply the third coat at about 0.68 kg/m², at right angles to the second

06 LIMITATIONS

- Protect from rain, damp and condensation until each coat has dried
- Not for roofs subject to long-term ponding water; not recommended for direct pedestrian traffic
- Substrate moisture at most 6% by weight; do not apply on substrates with rising moisture
- Apply between +8 °C and +40 °C, at no more than 80% relative humidity and at least 3 °C above the dew point
- Reinforce dynamic cracks and joints with fleece, locally or over the whole area
- Each coat must be fully dry and free of pinholes before the next; detail before the open areas
- Colours are approximate to the chart and may shift slightly in direct sunlight, without affecting performance

07 HEALTH & SAFETY

Water-based product. Wear gloves and eye protection; ensure reasonable ventilation. Avoid skin and eye contact; clean tools immediately after use. Keep out of reach of children. Consult the Safety Data Sheet (in preparation) before use.

DISCLAIMER

The information in this data sheet is given in good faith and reflects typical values and general good practice. Because site conditions and workmanship are beyond our control, Rayson gives no warranty implied from this document; users should verify suitability for their specific application and confirm they are working from the current issue. For project-specific advice, contact the Rayson technical team.

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