AR

One-component polyurethane liquid membrane for waterproofing and protection, black base coat

MINIMUM TOTAL CONSUMPTION	SERVICE TEMPERATURE	ELONGATION AT BREAK	COLOUR
1.5–1.8 kg/m²	-40 to +90 °C	> 500 %	Black

01 DESCRIPTION

AR is a one-component polyurethane that cures with atmospheric humidity. It forms a highly elastic, hydrophobic, seamless membrane with excellent adhesion to almost all substrates. It is based on a pure elastomeric, hydrophobic polyurethane resin with special inorganic fillers, giving excellent resistance to weathering. AR is the black version and is used as the first coat; in exposed applications it must be finished with AF (white/grey) as the second coat. Apply with roller, brush or airless spray (200–250 bar) in two coats. Minimum total consumption: 1.5–1.8 kg/m².

02 COLOUR

- Black

03 LIMITATIONS

Not recommended for:

- Substrates with low cohesion
- Swimming pools in direct contact with chemically treated water

In exposed applications, AR must be top-coated with AF.

04 MAIN FEATURES

- Seamless membrane, no joints
- Water-vapour permeable
- Resistant to hydrolysis and micro-organisms
- Cold applied, no open flame
- Excellent heat resistance: max service temperature 90 °C
- Remains elastic down to -40 °C

05 RECOMMENDED FOR

Waterproofing and protection of:

- Roofs and terraces
- Verandas and balconies
- Bathrooms
- Gypsum and cement boards
- Bituminous membranes
- Light roofing made of fibre-cement or metal
- Planters
- Car parks, as main waterproofing membrane within a system

06 SUITABLE SUBSTRATES

Concrete (reinforced or not), fibre-cement sheets, terrazzo, roof tiles, sound acrylic and bituminous coatings, wood, oxidised metal. Galvanised steel and aluminium require the appropriate primer. For other substrates, contact ETS Europe.

07 SYSTEM BUILD-UP

01	→ 02	→ 03	→ 04
Substrate	Primer (where required)	1st coat AR	2nd coat AF

08 APPLICATION PROCEDURE

Surface preparation	Remove loose material, dust, vegetation, salts, oil and grease. Grind off and remove loose parts. Where the membrane is applied without reinforcement, repair major cracks with Tectflex-PU before the final coat.
Priming	No primer is needed when all of the following apply: concrete strength C20/25, surface moisture < 5 %, application temperature 5–35 °C, relative humidity < 85 %. In all other cases, select a primer from the Hypertectum primer range and follow its data sheet.
Mixing	Mix by hand or with a low-speed mixer for about 10 minutes.
Application	Roller, brush or airless spray (200–250 bar). Apply successive coats every 6–24 hours, depending on weather conditions. For details, embed a reinforcement fleece in the first coat.

09 CONSUMPTION

1st coat, AR	0.7–0.9 kg/m²
2nd coat, AF	0.8–0.9 kg/m²
Minimum total	1.5–1.8 kg/m²

10 CLEANING

Wipe tools with dry paper or cloth, then clean with a suitable solvent. Re-using rollers is not recommended.

11 PACKAGING

1 kg, 6 kg, 15 kg, 25 kg

12 STORAGE

At least 12 months in the original unopened containers, in a dry place at 5–25 °C. Once opened, use immediately.

13 SAFETY

Contains flammable solvents. Keep away from naked flames and sparks. Do not apply in enclosed spaces without adequate mechanical ventilation and activated-carbon masks. Solvent vapours are heavier than air and collect at floor level. Avoid contact with skin and eyes. See the Safety Data Sheet.

14 TECHNICAL DATA — LIQUID (BEFORE APPLICATION)

PROPERTY	UNIT	METHOD	VALUE
Viscosity (Brookfield)	cP	ASTM D4287, 25 °C	3,000–6,000
Density	g/cm³	ASTM D1475 / ISO 2811, 20 °C	1.35–1.45
Flash point	°C	ASTM D93, closed cup	35
Tack-free time (25 °C, 55 % RH)	h	–	4
Recoat time	h	–	6–24

15 TECHNICAL DATA — CURED MEMBRANE

PROPERTY	UNIT	METHOD	VALUE
Service temperature	°C	–	-40 to +90
Max. short-term (shock) temperature	°C	–	200
Hardness	Shore A	ASTM D2240 / ISO 868	> 60
Tensile strength at 23 °C	kg/cm² (N/mm²)	ASTM D412 / EN ISO 527-3	> 60 (> 6)
Elongation at break at 23 °C	%	ASTM D412 / EN ISO 527-3	> 500
Water-vapour transmission	g/m²·h	ASTM E96 (water method)	0.8
Adhesion to concrete	kg/cm² (N/mm²)	ASTM D4541	> 20 (> 2)
QUV accelerated weathering (4 h UV at 60 °C, UVB lamps + 4 h condensation at 50 °C)	–	ASTM G53	Passed (2,000 h)
Hydrolysis (8 % KOH, 15 days at 50 °C)	–	–	No significant change in elastomeric properties
Hydrolysis (H_2O, 14-day cycle, RT–100 °C)	–	–	No significant change in elastomeric properties
Hydrolysis (H_2O, 30-day cycle, 60–100 °C)	–	–	No significant change in elastomeric properties
HCl (pH 2, 10 days at RT)	–	–	No significant change in elastomeric properties
Thermal resistance (100 days at 80 °C)	–	EOTA TR011	Passed

The information in this data sheet reflects current techniques and our best knowledge. Because the use of the product is beyond our control, neither the manufacturer nor the distributor can be held responsible for results. Instructions not covered by this data sheet require written confirmation from head office. Our general terms and conditions apply. This data sheet cancels and replaces all previous versions.