Hypertectum Duoflex 2K

Two-component, bitumen-extended polyurethane liquid membrane for waterproofing and protection, 1:1 by volume

MIXING RATIO	CONSUMPTION	SERVICE TEMPERATURE	COLOUR
1:1 by volume	Min. 1.5 l/m²	−40 to +80 °C	Black

01 DESCRIPTION

Hypertectum Duoflex 2K is a fast-curing, two-component, bitumen-extended polyurethane fluid, mixed 1:1 by volume: polyurethane (A) and bitumen (B). It forms a highly elastic membrane with strong adhesion to many types of surfaces and excellent mechanical and chemical resistance. It is based on a pure elastomeric, hydrophobic polyurethane resin extended with chemically polymerised virgin bitumen. For non-exposed applications. Apply with brush, roller, spatula or airless spray. Minimum consumption: 1.5 l/m².

02 COLOUR

Black

03 LIMITATIONS

Not recommended for:

- Unsound substrates
- UV-exposed applications

04 MAIN FEATURES

- Components mix easily, 1:1 by volume
- Fast curing
- Thick, bubble-free membrane possible
- Unmixed quantities can be stored for later use
- Low modulus gives excellent crack-bridging
- Excellent adhesion to almost any surface, with or without special primers
- No thinning required
- Excellent heat resistance; never turns soft. Max service temperature 80 °C, max shock temperature 200 °C
- Remains elastic down to −40 °C
- High elongation, tensile and tear strength, high abrasion resistance
- Good chemical resistance
- Good water-vapour barrier properties
- Can also be used as a joint sealant

05 RECOMMENDED FOR

Waterproofing and protection of:

- Basements and foundations
- Roofs, including inverted roof build-ups
- Green roofs and planters
- Gypsum and cement boards
- Polyurethane insulation foams
- Bituminous membranes
- Bathrooms (under tiles)
- Verandas and balconies (under tiles)
- Light roofing made of metal or fibre-cement
- Non-potable water tanks
- Bridge decks
- Cut-and-cover tunnels
- Irrigation channels

06 SUITABLE SUBSTRATES

Concrete (reinforced or not), fibre-cement, mosaic, cement roof tiles, old but well-adhered acrylic and bituminous coatings, wood, corroded metal, galvanised steel. For other substrates, contact ETS Europe.

Standard conditions for a concrete substrate:

Compressive strength (R28)	Moisture	Temperature	Relative humidity
≥ 15 MPa	< 10 %	5–35 °C	< 85 %

07 APPLICATION PROCEDURE

Surface preparation	Clean the surface with a high-pressure washer where possible. Remove oil, grease and wax. Remove cement laitance, loose particles, mould-release agents and old cured membranes.
Priming	Select the primer from the Hypertectum primer range and follow its data sheet.
Mixing	Mix equal volumes of the two components by hand or with a low-speed mixer (300 rpm). Apply the mixed material immediately. Pot life: 30–45 min at 20 °C.
Airless spraying	With low-power equipment, the mix may need thinning with a small amount of suitable solvent. Contact ETS Europe for advice.
Crack bridging	Before the main coat, apply Hypertectum Duoflex 2K or Hypertectum Duoflex 1K locally over any cracks wider than 1 mm.
Application	Brush, roller, spatula or airless spray.

08 CONSUMPTION

Minimum 1.5 l/m²

09 CLEANING

Wipe tools with paper towels, then clean with a suitable solvent. Rollers cannot be re-used.

10 PACKAGING

2 × 5 l, 2 × 20 l, 2 × 200 l

11 STORAGE

At least 12 months in the original unopened containers, in a dry place at 5–25 °C. Close opened tins airtight to store unused material.

12 SAFETY

Contains a small amount of volatile, flammable solvents. Apply in well-ventilated, no-smoking areas, away from naked flames. In enclosed spaces, use ventilators and activated-carbon masks. Solvent vapours are heavier than air and collect at floor level. See the Safety Data Sheet.

13 TECHNICAL DATA — LIQUID (BEFORE APPLICATION)

PROPERTY	UNIT	METHOD	VALUE
Viscosity, comp. A (resin)	cP	ASTM D4287, 25 °C	1,000–1,500
Viscosity, comp. B (bitumen mix)	cP	ASTM D4287, 25 °C	6,000–11,000
Viscosity of the mixture	cP	ASTM D2196, 25 °C	3,500–4,500
Density of the mixture	g/cm³	ASTM D1475 / ISO 2811, 20 °C	0.95–1.0
Flash point	°C	ASTM D93, closed cup	42
Tack-free time (25 °C, 55 % RH)	h	–	1–2
Recoat time	h	–	6–24
Pot life (20 °C)	min	–	30–45

14 TECHNICAL DATA — CURED MEMBRANE

PROPERTY	UNIT	METHOD	VALUE
Service temperature	°C	–	−40 to +80
Max. short-term (shock) temperature	°C	–	200
Hardness	Shore A	ASTM D2240 / ISO 868	35
Tensile strength at 23 °C	kg/cm² (N/mm²)	ASTM D412 / EN ISO 527-3	> 20 (> 2)
Elongation at break at 23 °C	%	ASTM D412 / EN ISO 527-3	> 2,000
Tensile set (after 300 % elongation)	%	ASTM D412	< 1
Adhesion to concrete	kg/cm² (N/mm²)	ASTM D4541	> 20 (> 2)
Thermal resistance (200 days at 80 °C)	–	EOTA TR011	Passed
QUV accelerated weathering (4 h UV at 60 °C, UVB lamps + 4 h condensation at 50 °C)	–	ASTM G53	Passed (1,000 h)
Chemical resistance (NaOCl 5 %, 10 days)	–	–	Unaffected
Hydrolysis resistance (KOH 8 %, 10 days at 50 °C)	–	–	Unaffected
Water absorption (10 days)	%	–	< 0.9

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.