UNIPROOF BITU-M

TORCH-ON POLYMER-MODIFIED BITUMINOUS MEMBRANE



Product Features

UNIPROOF BITU-M is a high-performance, polymer-modified bituminous waterproofing membrane engineered to provide reliable long-term moisture protection in exposed environments. Surfaced with reflective natural color slates, it delivers maximum resistance against harmful UV radiation and weathering. The integrated mineral slate finish provides durable mechanical protection against light foot traffic and occasional maintenance work while creating a visually pleasing aesthetic surface.

Designed as a versatile overlay system, **UNIPROOF BITU-M** can be installed directly over existing substrate surfaces, delivering a highly economical, efficient, and long-lasting solution for repairing leaking roofs and waterproofing new structures.

Advantages

High resistance to positive water & vapor pressure
Good dimensional stability under tension
Good flexibility to accommodate structural movements
High puncture, fatigue, and heat resistance
Resists water borne chemicals

Fields of Application

Roof Repairs & Re-roofing	Exposed Flat Roofs
Parapet Walls & Copings	Pitched & Sloped Roofs
Balconies & Roof Terraces	Gutters & Drainage Channels
Precast & Metal Deck Roofs	Residential Roof Decking
Canopies & Overhangs	Commercial & Industrial Roof Decks

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Physical Properties

Material	:	Polymer Modified Bituminous Membrane
Appearance	:	Black Grey
Weight	:	UNIPROOF BITU-M **:** 35 kg & 60kg / roll
Thickness	:	3.5 & 4.5mm
Size & Packing	:	UNIPROOF BITU-M **:** 1m x 10m roll **UNICOAT BITUMEN 300 :** 20 litres / pail

Technical Properties

Property	Test Method	Values
Thickness, (mm)	DIN EN 1849 - 1	3.5 / 4.5
Mass per unit area, (kg/m²)	DIN EN 1849 - 1	3.4 - 3.7 / 5.5 - 6.2
Reinforcement (g/m²)	EN 29073 - 1	220
Coating asphalt		Polymer-modified bitumen
Softening point (R&B), (°C)	ASTM D 36	> 115
Penetration @ 25°C, (0.1mm)	ASTM D 5	12 - 22
Tensile strength (L/T), (N/5cm)	DIN EN 12311 - 1	350/ 500
Elongation @ break (L/T), (%)	DIN EN 12311 - 1	25 / 35
Shear resistance at joints (L/T), (N/5cm)	DIN EN 12317 - 1	300 / 400
Tear resistance (L/T), (N)	DIN EN 12310 - 1 ASTM D 5147	130 / 150 ≥ 400 / ≥ 500
Resistance to static loading	DIN EN 12730	Static : L25
VOC (g/L)	ASTM D 3960 / D 2369	< 50
Tensile strength (L/T), (kN/m)	ASTM D 5147	≥ 15 / ≥ 18
Elongation @ break (L/T), (%)	ASTM D 5147	≥ 45 / ≥ 40
Puncture resistance, (N)	ASTM E 154	≥ 650

This technical data sheet is given in good faith and does not guarantee the application work.
All Unity Reliance technical data sheets & method statements are updated on a regular basis and can be subject to change without notice.
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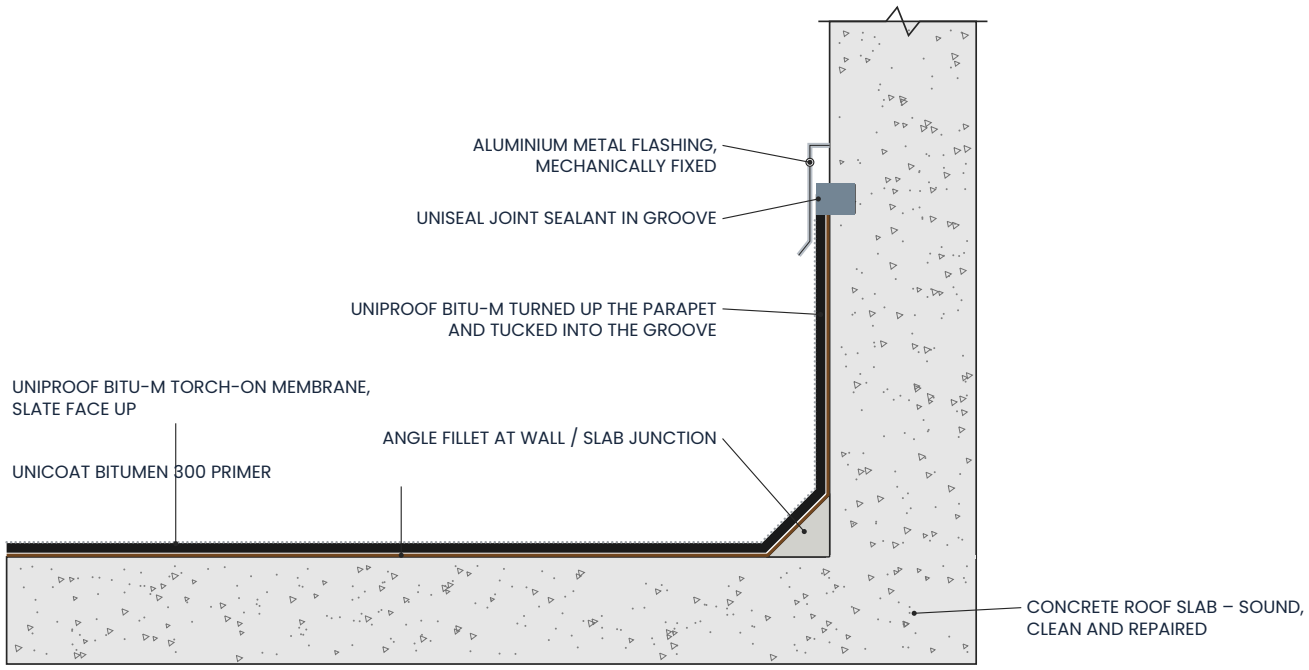
Typical Drawing

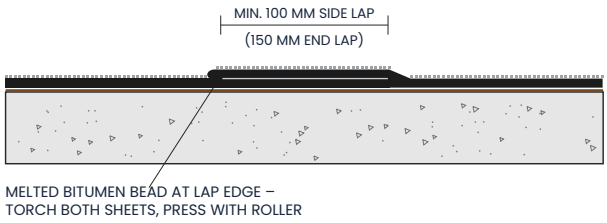
1 PARAPET UPSTAND

Section – not to scale



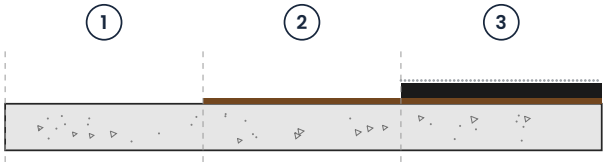
2 MEMBRANE LAP JOINT

Section – not to scale



3 ROOF BUILD-UP

Stepped section – not to scale



1. CONCRETE SLAB – CLEAN, SOUND, NO STANDING WATER
2. UNICOAT BITUMEN 300 PRIMER, LEFT TO TOUCH-DRY
3. UNIPROOF BITU-M TORCHED ON, SLATE FACE UP

LEGEND

- UNIPROOF BITU-M membrane
- UNICOAT BITUMEN 300 primer
- UNISEAL joint sealant
- Aluminium metal flashing
- Angle fillet
- Concrete

GENERAL NOTES

1. Prime with UNICOAT BITUMEN 300 and lay the membrane once it is touch-dry.
2. Start from the lowest point or drains so that laps shed water.
3. Minimum laps: 100 mm at sides, 150 mm at ends, fully torched and rolled.
4. Turn the membrane up all parapets and abutments over an angle fillet.
5. Do not over-torch; this exposes and damages the reinforcement.
6. Finished surface is for foot traffic and maintenance access only.

For illustration only, not for construction. Details to be designed and approved by the project engineer.

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Accessories



UNICOAT BITUMEN 300



TORCH GUN



PRESSURE ROLLER

Shelf Life & Storage

Store both loose and pallets of **UNIPROOF BITU-M** rolls vertically in a shaded area neatly covered by a thick fabric and tied securely in a manner that will minimise exposure to sunlight and UV. Do not stack pallets on top of each other. The membranes should be protected from all sources of heat and extreme temperatures.

The shelf life is **12 months** if stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduce its shelf life.

Health & Safety

Any naked flame should be kept well away from the gas cylinders. When ignited, the torch should be watched at all times. The torch should not be rested on finished roofing. Extreme care should be taken when working near combustible materials or items which might be scorched by the gas flame.

Cleaning

UNIPROOF BITU-M membranes contain a tacky bitumen compound which when applied can stick to human skin. Such stains can be removed by using a cloth dipped in a suitable cleaner.

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Installation Procedures

1 Surface Preparation | 2 Alignment & Torching | 3 Sealing & Up Stand

Installation Procedures

Step 1
SURFACE PREPARATION

PREPARATION

Thoroughly clean the surface to remove all dust, curing compounds, oil, and grease. Remove any protrusions or weak concrete, and repair surface defects using a suitable concrete repair mortar.

PRIMING

Dilute **UNICOAT BITUMEN 300** with 30–50% clean water and mix well. Apply evenly with a brush or roller over the prepared surface. Install torch-on membranes once the primer is touch-dry. If left exposed for over 48 hours, clean the surface and reapply a new coat of primer.

Step 2
ALIGNMENT

ALIGNMENT

Start membrane installation from the lowest point or drains so water flows over or parallel to the plies, ensuring upslope laps overlap downslope laps. Unroll and align the **UNIPROOF BITU-M** membrane, then re-roll it halfway and stand on the unrolled section to prevent movement. Maintain a minimum overlap of 100 mm for side laps and 150 mm for end laps.

TORCHING

Install **UNIPROOF BITU-M** using a propane gas torch (handheld recommended for better control). If using multi-burner machines, ensure uniform heat to avoid overheating.

Torch the embossed polyethylene side in an "L" pattern—directing 75% of heat onto the roll and 25% onto the substrate and lap area. As the embossing melts to a shiny bitumen finish, slowly unroll the membrane, sweep the flame side-to-side along the lap, and press firmly with a roller or boot to bond. Do not shift the roll once heating starts.

For subsequent rolls, heat both the roll and existing overlap evenly, concentrating on lap joints for a watertight seal. Torch and secure any remaining unbonded ends in the same manner.

CAUTION : DO NOT OVER TORCH AS THIS WILL EXPOSE THE REINFORCEMENT IN THE MEMBRANE AND CAUSE DAMAGE TO IT.

Step 3
SEALING & UP STAND

SEALING

Heat both overlaps and seal using a round-tipped trowel. Proper heating is indicated when a uniform bead of melted bitumen flows evenly from the membrane edges. Smooth and press excess compound into the seam with a heated trowel. Lift and re-torch any unbonded areas. Do not attempt to reseal by torching the top surface.

UP STAND

Seal all angles and abutments carefully to ensure full adhesion. Lap **UNIPROOF BITU-M** with the base membrane, extend it up the parapet wall, and tuck it into a concrete groove. Fill and seal the groove with **UNISEAL® Joint Sealant.**

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