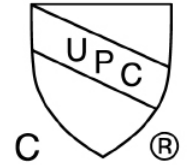


WATER-STOP MEMBRANE

Description: Shower pan liner. Load bearing bonded waterproofing and crack isolation sheet membrane with non-woven fibers on both sides.

Installation: Under tiling suitable for thin-bed and thick-bed installations.

Normative References: ANSI A118.10, ANSI A118.12, TCNA Handbook; Uniform Plumbing Code (UPC®) and National Plumbing Code of Canada; IAPMO Listed Product File Number 9205 and 9990.



References:

| REF. | DESCRIPTION | MEASURE |
|---------|--------------------|----------------------------|
| IFU5502 | WATER-STOP PRE-CUT | 4' x 6' 7" = 26 sqft |
| IFU5501 | WATER-STOP PRE-CUT | 5' x 6' 7" = 32 sqft |
| IFU5503 | WATER-STOP PRE-CUT | 6' 7" x 6' 7" = 43 sqft |
| IFU5100 | WATER-STOP ROLL | 3' 3" x 16' 5" = 54 sqft |
| IFU5113 | WATER-STOP ROLL | 3' 3" x 32' 10" = 108 sqft |
| IFU5200 | WATER-STOP ROLL | 3' 3" x 98' 5" = 323 sqft |
| IFU5300 | WATER-STOP ROLL | 6' 7" x 65' 7" = 430 sqft |

Test results

| PROPERTY | TEST METHOD | VALUE |
|--------------------------------|--------------------|-------------------------------|
| Seam Strength | ASTM D 751 | 24 lbs./in. |
| Breaking Strength Transverse | ASTM D 751 Proc. B | 1420 psi |
| Breaking Strength Longitudinal | ASTM D 751 Proc. B | 1160 psi |
| Dimensional Stability | ASTM D 1204 | ±0.2% |
| Waterproofness | ASTM D 4068 | Pass |
| Water Vapor Transmission | ASTM E96 Proc. E | 0.3 Perm |
| Crack Resistance | ANSI 118.12 | Rated Standard Performance |
| Service Requirement | ASTM C627-10 | Rated Light commercial (TCNA) |
| Shear Strength | | |
| 7- Day Dry | ASTM C482 | 119 psi |
| 7- Day Water Immersion | | 83 psi |
| 4- Week | | 133 psi |
| 12- Week | | 138 psi |
| 100- Day Water Immersion | | 85 psi |
| Resistance to temperature | | |
| Total thickness (approximate) | EN 1849-2 | 20 mils |

Checks during production and/or on the finished product:

System 2+ of assessment and verification of constancy of performance according to Directive 89/106/CEE.

Checks on every production batch:

- Water penetration resistance
- Traction properties: tearing, elongation and tensile stress
- Geotextile adherence
- Visible defects, length, width and weight

Areas of application

WATER-STOP is suitable to be used in conjunction with ceramic and stone tile covering for wall and floor surfaces where protection against the penetration of moisture is necessary in new construction and renovation projects. It is suitable for interior applications and for exterior floors and walls over suitable substrates.

WATER-STOP isolates common shrinkage cracks found in residential and commercial construction from telegraphing to finished surface.

Applications include showers, tub surrounds, bathrooms, commercial and residential kitchens, backsplashes and areas surrounding swimming pools.

WATER-STOP membrane should be bonded to substrate with modified thin-set mortar. Thin-sets must be appropriate for the substrate and conform to ANSI A118.4, ANSI A118.11 and ANSI A118.15, or the appropriate standards and TCNA Handbook recommendations.

Connection to drains methods:

Drains must have a suitable membrane clamping collar or an integrated bonding flange.

- When installing with a clamping ring type drains as per ASME A112.6.3 or ASME A112.18.2/CSA B 125.2, treat the drain connection before the waterproofing installation:
 - Remove strainer and clamping ring. Lay the WATER-STOP membrane over the top of the drain and trace drain hole opening and bolt holes: cut an "X" where each bolt will pass through the membrane. Carefully cut out inside drain opening to allow the drain grate to be threaded into the clamping ring.
 - Apply thin-set mortar to the floor area from the outer edge of the drain outward.
 - Apply 2 beads of W-S MASTIC sealant around the drain hole opening to seal between the drain body and the underside of the membrane and install the WATER-STOP membrane properly embedded into bond coat, making sure to align the previously cut holes for the bolts and drain opening.
 - Apply pressure to the membrane with the flat side of the trowel squeezing the sealant toward the drain hole and the thin-set mortar outward toward the sheet edges or the perimeter of the shower.
 - Reset the drain clamping ring and tighten clamping ring bolts through openings in the membrane. Protect weep holes from clogging.
- When installing with a drain with integrated bonding flange, follow the manufacturer instructions to install the drain. Once the mortar is cured enough to walk on, the WATER-STOP membrane can then be installed:
 - Apply thin-set mortar to the floor area including the drain bonding flange except the inner 1- 2 area.
 - To seal between the drain and the underside of the membrane Apply 2 beads of W-S MASTIC sealant in concentric circles around the drain hole opening.
 - Install the WATER-STOP membrane. Apply pressure to the membrane with the flat side of the trowel squeezing the sealant toward the drain hole and the thin-set mortar outward toward the sheet edges or the perimeter of the shower.

Substrate Requirements

Substrate must meet requirements set forth by the TCNA and ANSI standards.

Surfaces shall be structurally sound, stable and rigid enough to support ceramic tile, stone, thin brick and similar finishes. Substrate deflection under all kind of loads, must not exceed $L/360$ for thin bed ceramic tile/brick installations or $L/720$ for thin bed stone installations where "L" = the span length in inches.

- Concrete and masonry:

It must be free of curing agents, sealers, water repellents or other treatments that prevent membrane bonding. The maximum amount of moisture in the concrete substrate should not exceed 5 lbs./1000 sq. ft. (2.26 kg/92.9 m²)/24 h per ASTM F-1869 or 75% relative humidity as measured with moisture probes per ASTM F2170 and should be between 45°F (7°C) and 90°F (32°C).

- Plywood floors (interiors only) – minimum construction for direct bond:

1. Subfloor: 5/8" (15 mm) thick, exterior glue, tongue and groove plywood over bridged 2" x 10" (40 mm x 240 mm nominal) joists spaced 16" (400 mm) o.c. maximum; fasten plywood 6" (150 mm) 4 o.c. along sheet ends and 8" (200 mm) o.c. along intermediate supports with 8 d (65 mm) ringshank nails or screws; allow 1/8" (3 mm) between sheets; all sheet ends must be supported by a framing member; glue sheets to joists with construction adhesive.
2. Underlayment: 5/8" (15 mm) thick exterior glue plywood fastened 6" (150 mm) o.c. along sheet ends and 8" (200 mm) o.c. in the panel field (both directions) with 8d (65 mm) ring-shank nails or screws; allow 1/8" (3 mm) between sheets and 1/4" (6 mm) between the underlayment and any abutting surfaces; offset underlayment joints from joints in subfloor and stagger joints between sheet ends; glue underlayment to subfloor with construction adhesive. The fasteners used to fasten the underlayment to the subfloor should not penetrate beyond the underside of the subfloor nor into the joints.

In floors waterproofing the surface need a minimum slope to drains of 1/4" per 1' (2%). As shower pan liner WATER-STOP membrane should be installed over properly prepared sloped fill or pre-sloped substrates.

Suitable Substrates

- Interiors: Concrete, concrete & brick masonry, cement mortar beds, cement plaster, gypsum wallboard, exterior glue plywood, ceramic tile & stone, cement terrazzo, cement backer board, poured gypsum underlayment, fiber-cement underlayment, fiber-reinforced water-resistant gypsum backer board/underlayment
- Exteriors: Concrete, ceramic tile & stone, cement terrazzo

Limitations

Do not use as a primary roofing membrane over occupied space.

WATER-STOP cannot accommodate deflection greater than industry guidelines for the flooring surface.

Do not use over dynamic expansion joints, structural cracks or cracks with vertical differential movement. Do not use over cracks >1/8" (3 mm) in width.

Do not bond to particle board, OBS, interior glue plywood or hardwood surfaces.

Do not expose to negative hydrostatic pressure.

WATER-STOP is not designed for use as a wearing surface or exposed roof membrane. It must be covered with ceramic tile, stone, brick, concrete, screeds, terrazzo or other protective surface. For temporary cover, use protection board.

Do not expose membrane directly to sun or weather for more than 5 days.