

# MonniThane 400

Elastomeric Single Component  
Polyurethane Waterproofing Membrane

## Product Description

MONNITHANE 400 is a single component moisture-cured elastomeric polyurethane membrane coating. It is liquid applied, user friendly, gives long lasting maintenance and free waterproofing protection to concrete and steel structures.

## Uses

MONNITHANE 400 is designed to waterproof most applications within the building and construction industry including:

### Tiled or covered areas

- ▶ Shower recess and wet areas (floor & upturns)
- ▶ Decks, balconies, terraces and podiums
- ▶ Retaining walls
- ▶ Planters and landscaped areas
- ▶ Structural slabs
- ▶ Water retaining structures, fountains & swimming pools

### Exposed Areas prior to application of surface wearing toppings

- ▶ Roofs
- ▶ Decks
- ▶ Terraces, balconies
- ▶

### Building substrates including:

- ▶ Concrete
- ▶ Cement
- ▶ Render
- ▶ Brick and block work
- ▶ Plaster board
- ▶ Masonry
- ▶ Steel and Timber

## Advantages

- ▶ Creates a seamless, tough & flexible elastomeric membrane when fully cured.
- ▶ Excellent chemical resistance
- ▶ Resistant to standing water
- ▶ Excellent adhesion to various substrates with suitable primer
- ▶ Excellent resistance to water and carbon dioxide permeability
- ▶ High water vapour permeability
- ▶ Free of pitch or bitumen modification
- ▶ Ready to use – no measuring and mixing required
- ▶ Excellent workability
- ▶ Reaches sufficient cure generally in 24 hours allowing for toppings or coverings to be placed
- ▶ Easy to repair

## Usage Instructions

### Surface Preparation

The surface of the concrete shall be sound, clean and uncontaminated.

This preparation shall be such as to leave a sound exposed concrete surface free from dust, loose particles and any deleterious matter. If the concrete surface is defective or has laitance, it must be cut back to a sound base.

Oil, grease, varnishes, rust, dust and mould on metal surfaces shall be removed by wire or stiff brushing and grit blasting then wiped with SOLVENTE 10 prior to priming.

New concrete or cementitious surfaces should be at least 28 days old and have moisture content not exceeding 5%. Old or existing surface should be refurbished mechanically to ensure clear and sound substrate.

### Crack treatment

Shrinkages and non-moving structural cracks less than 1.0mm shall be filled with a pre-treatment strip of MONNITHANE 400 of 1.0mm thick extended to 75 mm on both sides of the crack.

Voids and honeycombs shall be patched with MONNELI'S range of repair products allowing the area to cure before applying the membrane.

### Right angle bends

All right angle bends must have a coving detail installed. In areas where parapet walls, columns, pipe penetrations are present, a 45° coving fillet shall be made at all corners using MONNIREP FIBER, a Fiber reinforced shrinkage controlled mortar for concrete repair to the water saturated cured surface.

All other angles, joints, protrusions and stress joints should be pre-treated with a heavy application of MONNITHANE 400 extending 150mm on both sides of the coving.

### Movement Joints

Expansion and movement joints should be sealed with MONNISEAL, a Polyurethane sealant. When cured a stripped layer MONNITHANE 400, 200mm wide shall be applied and centered over all the sealed joints. Allow to cure before the general application.

While the membrane is still wet cover with a correct cut strip of fiber mesh and press it to soak. Saturate the fiber mesh with another coat of MONNITHANE 400 until it is fully covered. Allow curing before applying further coats of the waterproofing membrane.

### Priming

Highly porous concrete or concrete containing micro-silica will be primed using MONNIPRIME PU, a Polyurethane primer. The primer shall be applied at a rate of 5-6m<sup>2</sup>/L.

The primer should be left to achieve a tack-free condition for 6-8 hours before applying the top coat. A second coat of primer may be required if the substrate is excessively porous.

MONNITHANE 400 can be applied directly over MONNIFOAM HD, a polyurethane spray foam after thorough surface preparation without the need of primer.

### Mixing

MONNITHANE 400 should be stirred before use until a uniform color and consistency is achieved. Product is ready for use.

### Application

MONNITHANE 400 shall be applied by brush, roller, trowel or airless spray in 2 coats to achieve a minimum dry film thickness of 1.0 mm for each coat. The two coats must be applied at right angles to one another. A layer of ARMOFLEX, a fiber glass mesh should be embedded between the two MONNITHANE 400 coats over pipe culverts, floor drains, corner joints and floor / wall junctions.

The final wet coat of MONNITHANE 400 shall be spread with sufficient clean silica and before applying tile adhesives. Tiling or finished floor installations should be carried out as soon as possible after full cure of membrane is established.

### Cleaning

Tools and equipment used for MONNITHANE 400 should be cleaned with SOLVENTE 10 directly after use. Hardened material can only be removed mechanically.

## Technical Data

Category	Typical Values
Appearance	Liquid
Color	Grey, Tan
Density at 25°C	1.4 kg/L
Elongation (ASTM D412)	> 400 %
Tear resistance (ASTM D624)	> 10 N/mm
Tensile Strength (ASTM D412)	> 6 N/mm <sup>2</sup>
Tensile Adhesion Strength (ASTM D 4541)	> 1.5 N/mm <sup>2</sup>
Water vapor transmission (ASTM E96)	0.2 g/h.m <sup>2</sup>
Crack bridging (ASTM C836)	No cracking, splitting pinholes or any other type of failure was observe at 3.2 mm
Shore A Hardness	60 ± 5
Tack free time at 25°C	12 hours 2 days at 1.0mm thickness
Swelling in Water at 3 days	Nil

All values are subject to 5-10 % tolerance

VER.1.2019

### Consumption

1.2 m<sup>2</sup>/Liter

### Packaging

The product supplied into sealed metallic containers of 4 and 15 Liters.

### Storage

Keep the product in dry and sheltered place at temperature between +5°C to +25°C. In these conditions and in closed original containers, the product will have a shelf life of 12 months.

### Health & Safety

During application, wear appropriate protective clothing, goggles, gloves and respiratory equipment if necessary.

In case of contact with skin, rinse with water and again wash thoroughly with soap and water. In case of contact with eyes, rinse with plenty of water and seek medical advice accordingly. If ingested, obtain medical attention immediately. Do not induce vomiting.

## Legal disclaimer

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VER.1.2019