

# Mer-Thane 320 Waterproofing Membrane

## Single-Component, Bitumen Modified Urethane Polyurea Membrane

**PRODUCT DESCRIPTION**

Mer-Thane 320 is a single-component, bitumen modified, fluid-applied, coal tar free, urethane polyurea membrane designed for use between slabs, foundation walls, planters, bridges, tunnels, and basement applications.

**CHARACTERISTICS**

- Economical
- VOC Compliant
- Resistant to Bacterial Growth
- Available in Horizontal & Vertical Formulations
- Easy-to-Install
- Meets ASTM C836 and E96 Criteria

**USES/APPLICATIONS**

- Positive side waterproofing applications
- Split slab construction
- Exterior foundation walls
- Planter boxes
- Between slab waterproofing
- Base slab waterproofing
- Tunnels & highway bridges
- Over occupied spaces

**CAUTIONS & LIMITATIONS**

- The substrate surface must be structurally sound, clean, dry and free of dirt, dust, oil, grease, paint or other contaminants at the time of material application.
- Not suitable as a finished surface, the 320 Waterproofing Membrane can not withstand direct wear and abrasion, a topcoat must be applied.
- Not UV stable
- Do not install in damp weather or when rain is expected within 24 hours.
- Mer-Ko waterproofing systems are designed for professional installation.
- System warranties require installation by currently listed applicators.
- Not designed for vehicular or heavy steel wheeled traffic.
- Not for use on slabs over unvented metal pans, suspended pool decks, swimming pools, magnesite, lightweight concrete, asphalt surfaces or asphalt overlays.
- Concrete substrates must have a minimum compressive strength of 3,000 psi tested by "point loading" technique.
- The moisture content of the substrate should be checked and approved by a qualified professional prior to installation.
- When contemplating a deck installation over an unheated enclosed space (e.g., garage, etc.) provision must be made to vent the area.
- Containers that have been opened should be used as soon as possible. The product is moisture-reactive and will gel or set up when exposed to moisture in the atmosphere. A polyethylene sheet must be used as a protective blanketing prior to re-sealing the lid on a partially used container. Keep the lid tightly sealed when the material is not in use.

**TECHNICAL DATA - Vertical**

<b>Coverage Rate</b> .....	200 <sup>2</sup> (18.6 m <sup>2</sup> )/5 gallon pail (at 30 mils DFT)
<b>Hardness</b> .....	35 - 45 (ASTM D2240, Shore A)
<b>Tear Resistance</b> .....	60 - 80 pli (ASTM D624, Die C)
<b>Tensile Strength</b> .....	450 - 550 psi (ASTM D412)
<b>Elongation</b> .....	450 - 550%
<b>Specific Gravity</b> .....	1.21
<b>Total Solids by Weight</b> .....	84% (ASTM D2697)
<b>Total Solids by Volume</b> .....	76% (ASTM D2697)
<b>Viscosity</b> .....	Pasty (at 80°F/27°C)
<b>Service Temperature</b> .....	-25 to 200°F (-31.7 to 93.3°C)

**TECHNICAL DATA - Horizontal**

<b>Coverage Rate</b> .....	200 <sup>2</sup> (18.6 m <sup>2</sup> )/5 gallon pail (at 30 mils DFT)
<b>Hardness</b> .....	50 - 60 (ASTM D2240, Shore A)
<b>Tear Resistance</b> .....	100 - 140 pli (ASTM D624, Die C)
<b>Tensile Strength</b> .....	450 - 550 psi (ASTM D412)
<b>Elongation</b> .....	450 - 550%
<b>Specific Gravity</b> .....	1.21
<b>Total Solids by Weight</b> .....	85% (ASTM D2697)
<b>Total Solids by Volume</b> .....	76% (ASTM D2697)
<b>Viscosity</b> .....	2500-6500 cps (at 80°F/27°C)
<b>Service Temperature</b> .....	-25 to 200°F (-31.7 to 93.3°C)

- Before using Mer-Thane products, read all container labels, MSDS, application instructions and storage and handling information carefully. Applicators should wear an approved respirator, protective glasses, clothing and gloves. Contains isocyanates, avoid contact of material with skin or eyes and avoid breathing vapors. Mix and apply materials in well ventilated areas and observe normal safety precautions. Mer-Thane materials are classified as corrosive material and can cause irritation in prolonged exposure. Wash skin thoroughly with soap and water if product(s) contact skin. Consult the Material Safety Data Sheet for additional information and precautions.
- Protect all finished surfaces that are not intended to receive the deck coating system materials.
- Use extra caution in protecting surfaces not to be coated when using spray application methods. Windy conditions or over spray can damage surrounding surfaces.

**COLOR**

Mer-Thane 320 is a black.

**PACKAGING**

5 gallon (18.9 liter) pail.

**INSTALLATION CONDITIONS**

Mer-Thane 320 Membrane should be installed when surface and ambient temperatures are above 50°F (10°C) and below 100°F (38°C). Temperature should be at least 5°F above the dewpoint. Do not install in damp weather or when rain is expected within 24 hours.

Mer-Thane 320 Membrane is very sensitive to heat and moisture. Higher temperatures and/or high humidity will significantly accelerate the cure time and shorten the pot life. Low temperature and/or low humidity will extend the cure time.

**SUBSTRATE PREPARATION**

The substrate surface must be clean, dry and free of dust and any other contaminants at the time of material application. A minimum finished deck slope of 2% (1/4 unit vertical in 12 units horizontal) is required for proper drainage. Use No. 26 gage bonderized steel or equivalent flashing around the perimeter; clean and degrease all metal flashings with Xylene or MEK. Do not use copper perimeter flashings. Stainless steel requires scuffing with the use of 100-120 grit sand paper prior to cleaning.

Plywood Surfaces

Plywood substrates shall be a minimum 5/8 inch thick (16mm) exterior grade, PS 1, exposure one, plywood, complying with and installed in accordance with the 2006 International Building Code and or 2009 International Building Code with all edges blocked. Face plies must be perpendicular to the supports. The plywood must be attached to all blocking and end bearings with countersunk wood screws, screw or ring-shank nails equivalent to 8d common nails, spaced 4 inches (101.6mm) on center at sheet perimeters and 8 inches (203.2mm) on center in the field. All plywood substrate joints must be open a minimum of 1/8 inch and clean.

Concrete Surfaces

Concrete surfaces must have a finish equivalent to steel troweling with a fine hair brooming. The surface must be clean, sound and provide a uniform surface free of depressions and ridges. All holes must be cleaned and filled with an appropriate Mer-Ko Underlayment. All high spots must be removed by chipping or grinding. Concrete control joints should coincide with stress relief concentration points, with a maximum spacing of 20 ft (6.1 m). All control joints in the concrete substrate must be clean and open a minimum of 1/8 inch.

Surface imperfections, if left untreated, will be noticeable in the finished application. Concrete not meeting the above requirements should be prepared and properly abraded by shotblasting and/or hydro-blasting (10,000-20,000 psi). If water is used, allow to dry completely. Neat cement sacking is not an acceptable surface preparation.

**PRIMER**

Mer-Thane 320 should be used in conjunction with Mer-Thane 320U Primer to promote adhesion and minimize outgassing. Primer is optional on new concrete and vertical masonry walls. Do not use 320U Primer on plywood. Consult a Mer-Ko Technical Representative for details.

Prime the necessary surfaces to receive the coating, including all flashings and necessary vertical or sloping surfaces, curbs, cants, parapets, etc. Do not use 320U primer on plywood. See the Mer-Thane 320 Technical Application Guide or the 320U Primer data sheet for complete mixing and application information.

**MIXING**

Mer-Thane 320 Waterproofing Membrane should be thoroughly mixed using a mechanical mixer at slow speed until a homogenous mixture and color is obtained. Use care when mixing to avoid air bubbles. DO NOT entrain air into the mixture. This can result in pinholes, blisters and/or shortened pot life.

**APPLICATION****Crack & Joint Treatment**Plywood Surfaces

Apply Mer-Thane 320 Waterproofing Membrane reinforced with Mer-Ko Fiber Tape around all pipes and drains. Stripe coat all plywood board joints and sheet metal flashing termination/transitions by applying Mer-Thane 320 Waterproofing Membrane and reinforce with Mer-Ko 4 inch Fiber Tape embedded for a distance of 2 inches on both sides. Allow the surface to cure for 16 to 48 hours.

Concrete Surfaces

Stripe coat all concrete control joints, and sheet metal termination/transitions and any other openings with Mer-Thane 320 Waterproofing Membrane and reinforce with Mer-Ko 4 inch Fiber Tape embedded for a distance of 2 inches on both sides.

Additionally, stripe coat any other cracks in the concrete using Mer-Thane 320 Waterproofing Membrane and embed Mer-Ko 4 inch Fiber Tape for a distance of 2 inches on either side of the crack. Allow the surface to cure for 16 to 48 hours.

Mer-Thane 320 Waterproofing Membrane should be thoroughly mixed using a mechanical mixer at slow speed until a homogenous mixture and color is obtained. Use care when mixing to avoid air bubbles. DO NOT entrain air into the mixture. This can result in pinholes, blisters and/or shortened pot life.

Applying

Apply Mer-Thane 320 Waterproofing Membrane to the perimeter flashing using a brush, or phenolic resin core roller and to the surface using a squeegee or notched trowel at 30 mil DFT. Apply with continuous coverage to minimize lines and/or streaking, back roll as necessary. Allow Mer-Thane 320 Waterproofing Membrane to cure a minimum of 16 hours and a maximum of 48 hours at 70°F (21°C) 50% RH prior to proceeding with additional coats to ensure proper adhesion. If more than 48 hours elapses, the surface must be primed.

Waterproofing Membrane - Second Application

Mix and apply a second coat of Mer-Thane 320 Waterproofing Membrane to the perimeter flashing and entire surface in the same manner as the first, at 30 mil DFT. Apply with continuous coverage to minimize lines and/or streaking.

Allow the 320 Waterproofing Membrane to cure a minimum 16 hours and a maximum of 48 hours at 70°F (21°C) 50% RH before proceeding with any succeeding coats to ensure proper adhesion. Then, install protection board or other protective materials as necessary.

**CLEAN-UP**

Equipment should be cleaned using an acceptable, environmentally safe solvent immediately after use.

**FIRST AID****EYE CONTACT**

Flush eye with water for at least 15 minutes. Get medical attention promptly.

**INHALATION**

Take person to fresh air. If breathing is difficult, administer oxygen. Get medical attention immediately.

**SKIN CONTACT**

Wipe off contacted area and wash thoroughly with soap and water. If redness, itching, or a burning sensation develops, seek medical attention immediately.

**INGESTION**

Do not induce vomiting. Consult physician immediately.

**FIRE**

Wear self-contained breathing apparatus with full face piece and protective clothing. Use foam, carbon dioxide, dry chemical, and/or halogenated agents.

**SPILL OR LEAK**

Wear skin, eye, and respiratory protection during cleanup. Soak up material with absorbent and shovel into a chemical waste container. Cover container, and remove from work area.

**STORAGE & HANDLING**

Store all Mer-Thane materials in a dry environment at temperatures between 65 to 70°F (18 to 21°C). All materials should be stored in compliance with local fire and safety requirements. Do not store at high temperatures or in direct sunlight. Do not allow uncured materials to freeze. Store materials in tightly closed original containers, off the ground, on plywood or non-asphaltic insulation board. Avoid moisture contamination. Always wear proper safety equipment, including an approved respirator, eye protection and gloves when mixing and/or applying these products. Do not breathe vapors. Do not keep opened containers in confined spaces. Consult published OSHA Occupational Safety and Health Administration) regulations for additional information and compliance information.

**SHELF LIFE**

The shelf life is one (1) year from the date of manufacture in the original, unopened metal container when the material is properly stored.

**WARRANTY**

Limited manufacturer's defect warranty. Contact Mer-Ko Technical Service Department for specific warranty information or [www.parexmer-ko.com](http://www.parexmer-ko.com).

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