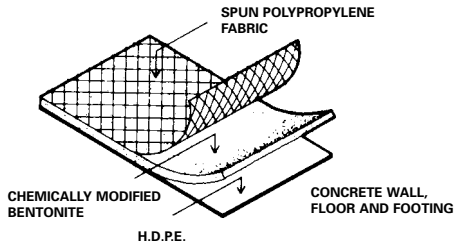
# Paraseal® W/GM/LG

## Multiple Component Sheet Waterproofing System and Gas Membrane

### Product Description

Paraseal W/GM/LG is a multi-layer sheet membrane waterproofing system installed with Para JT Tape to form a superior membrane barrier to both water and aliphatic gases. It consists of a self-sealing, expandable layer of granular bentonite laminated at the rate of up to one pound per square foot to an impermeable, high density polyethylene (HDPE). The third component is a protective layer of spun polypropylene. Together, these three components with Para JT Tape form a tough, high performance waterproofing membrane manufactured in controlled thicknesses of 170 mils to 200 mils, specially designed for blindside installations such as lagging, under floor and elevator pits. Paraseal W/GM/LG also withstands applications where shotcrete is blown directly into the face of the membrane. This is not a containment membrane.




### Basic Uses

Paraseal W/GM/LG is especially effective when waterproofing from the blindside (lagging, etc.) where the waterproofing membrane is applied before the walls or floor are poured. It is designed to resist damage from multiple exposure to inclement weather, extremely abrasive concrete pours or direct installation of shotcrete. Paraseal W/GM/LG will also exhibit outstanding protection against water intrusion in areas of high water heads. Paraseal W/GM/LG is also used with Para JT Tape to waterproof and/or gasproof structures below grade with integrally bonded seams. The Para JT Tape is installed within the Paraseal W/GM/LG membrane sheet overlaps where it remains protected while providing a flexible, waterproof and gasproof seal.

### Packaging

4′ x 24′ (1.2m x 7.3m) standard rolls.
Also Available by SPECIAL ORDER:
• Larger size rolls may be customized for a nominal cutting charge.

NOTE: This specification data is not complete. Use installation guidelines from specification manual for detailed information.

### INSTALLATION

For complete details, refer to our website. All blindside installations have bentonite side facing installer.

### General Notes

Paraseal W/GM/LG is provided having a removable lap protector tape installed beneath the bentonite layer along the perimeter edges. This lap protector tape must be removed at the jobsite to clean the edges of the membrane in preparation for insertion of the Para JT Tape. Clean HDPE with solvent. The Para JT Tape is always installed according to instructions in the Para JT Tape data sheet. It is advised that the Para JT Tape be fully in place on any membrane sheet prior to its overlapping, or being overlapped by, another Paraseal W/GM/LG membrane sheet. All overlapped seams are roll-pressed using a hand-held metal seam roller to effect a complete seal and to fuse the membrane sheets together. Batten-strips are field fabricated to repair slits made in the installed membrane that may occur at penetrations. A batten-strip is fabricated by covering one face of a 6″ (15.2cm) wide strip of HDPE liner with tightly abutting, side-by-side strips of Para JT Tape.

### Preparatory Work

Examine all surfaces prior to starting application. All spaces between lagging larger than 1″ (2.5cm) shall be covered with 3/4″ (19.1mm) plywood prior to installation.

### Lagging

Paraseal W/GM/LG may be installed in a vertical or horizontal direction. Lap joints 2″ (5.1cm) shingle fashion (top over bottom) when pouring against (bottom over top) and when shotcreting against. Trowel Paramastic or TREMproof 201/60T around all tiebacks and penetrations. Protect from flooding prior to concrete pour.

### Earth

Paraseal W/GM/LG may be used to cover earth design cuts which are to serve as the external side of a vertical wall form. Overlap joints 2″ (5.1cm)

### Buried Forms

Paraseal W/GM/LG may be directly attached to forms which are to be left in the earth after the concrete is poured (i.e. elevator pits, sumps, etc.). Overlap joints min 2″ (5.1cm).

### Under Floor Slab

Place into position unrolled 24′ (7.3m) of Paraseal W/GM/LG membrane.

With Para JT Tape fully in place and protected by its paper backing, position overlapping membrane sheet to overlap 2″ (5.1cm). Solvent clean HDPE surfaces within the overlap area. Remove the paper backing from the Para JT Tape within the overlap and press the seams together. If placed directly over prepared grade, the membrane must be protected against punctured by placing protective pads beneath the rebar chairs. Just prior to the concrete placement, inspect and patch any damages to the installed

membrane. Place concrete as soon as possible after membrane installation and protect bentonite surfaces from rain until covered with concrete.

### Penetration

Tiebacks, tie bolts, misaligned soldier piles, whalers and bracking may all penetrate the Paraseal GM/LG membrane. Should this occur, contact your Tremco representative for proper detailing instructions.

### Protection

The Paraseal GM/LG dual waterproofing system has a PUNCTURE RESISTANCE OF 169 lbs. (76.6 kg) and does not require an additional protection course for most applications. For special applications, contact your Tremco Representative for details.

### Storage

Protect from moisture. Store on skid or pallet, cover with polyethylene or tarp. Do not double stack pallets.

### Availability

Immediately available from distributors worldwide.

### Limitations

If groundwater is brackish, consult Tremco. Do not apply in standing water or over snow. Paraseal products require compaction/confinement to be effective. A minimum 24 psf confinement is required. Contact your local representative or Technical Services for more information.

### Warranty

Tremco warrants its Paraseal Membranes to be free of defects in materials, but makes no warranty as to appearance or color. Since methods of application can affect performance, Tremco makes no other warranty, expressed or implied, including warranties of MERCHANTABILITY and FITNESS FOR A PARTICULAR PURPOSE, with respect to Paraseal Membranes. Tremco's sole obligation shall be, at its option, to replace or to refund the purchase price of the quantity of Paraseal membrane proved to be defective and Tremco shall not be liable for any loss or damage including incidental or consequential damages arising from the use of Paraseal Membranes.

## TYPICAL PHYSICAL PROPERTIES

| Physical Properties | Value | Test Method |
|---|---|---|
| Tensile Strength: Membrane (PSI) | 4,000 PSI (27.6MPa) | ASTM-D412 |
| Resistance to microrganisms (bacteria, fungi, mold, yeast) | unaffected | |
| Elongation-ultimate failure of membrane: | 700% | D412 |
| Puncture Resistance: | 169 Lbs (76.6kg) | FTMS 101B |
| Resistance to hydrostatic head (Ft. (m) of water): | 150 Ft (45.6m) | ASTMD751 Method A |
| Resistance to water migration under membrane: zero leakage | 150 Ft (45.6m)/Head | Footnote #1 |
| Permeance co-efficient of permeability: | $2.7x10^{-13}$cm/sec or 1.7ng/Pa.s.$m^2$ | ASTM96 |
| Non-toxic: Do not ingest | | |
| Freeze/thaw cycles: No effect before or after installation. | | |
| Non-staining: Resistance to chemicals & gasses: Extremely high resistance - contact manufacturer for specific information. | | |
| Life Expectancy: Both high density polyethylene and bentonite have life expectancy measurable in the thousands-of-years. | | |
| Permeability of HDPE and Para JT in "Barrier" b 10-10mL (aSTP)/cm2.sec.cm Hg | 0.50 | |

FOOTNOTES FOR TECHNICAL DATA:

1. A 1" (2.5cm) diameter hole was cut in the middle of a 3 1/2" (8.9cm) diameter sample of Paraseal GM/LG. Sample clamped in 3" (7.6cm) diameter permeameter, 150' (45.6m) waterhead applied.
2. Above values on 20 mil HDPE system.

**Tremco Commercial Sealants & Waterproofing**
3735 Green Road, Beachwood, OH 44122 // Phone: 216.292.5000 // 800.321.7906
220 Wicksteed Avenue, Toronto, ON M4H 1G7 // Phone: 416.421.3300 // 800.363.3213
1451 Jacobson Avenue, Ashland OH 44805 // Phone: 419.289.2050 // 800.321.6357