

### **BELOW-GRADE WATERPROOFING**

Cold Fluid-Applied | Hot Fluid-Applied | Sheet-Applied | HDPE/Bentonite Hybrid Systems | Crystalline | Drainage | Protection | Reinforcement | Accessories





### Below-Grade Waterproofing, Above and Beyond

Below-grade waterproofing is critical to the long-term performance of any structure — and for over 90 years, Tremco has been providing tested, proven waterproofing products to architects, distributors, building owners and contractors all over the world.

We are proud to offer a wide array of options that provide maximum protection and expedite construction schedules: cold fluid-applied, hot fluid-applied, sheet-applied, HDPE/bentonite, crystalline, and hybrid waterproofing systems.

And in addition to a complete line of compatible primers, drainage, protection courses, sealants, water stops and reinforcing materials, Tremco is also uniquely positioned to be your single-source for high-performance solutions *for all six sides of the building enclosure*. From the foundation to the roof, and everything in-between.

Tremco Commercial Sealants & Waterproofing is now proud to be part of Tremco Construction Products Group.

### The Tremco Construction Products Group Difference

Speed construction or restoration. Simplify installation. Extend the construction season. A Tremco Construction Product Group (CPG) single-source building envelope means more for everyone – more satisfied contractors, more comfortable occupants or tenants, and more efficient structures and cost-effective operation for owners.



#### **Faster Construction Time**

Lightweight, fast-curing and prefabricated products mean less occupant disruption, faster return to service, less revenue lost — and no call-backs.



#### **Any Look You Want**

A wide range of colors and finishes like brick, granite, metals, stucco and more provide maximum flexibility in your roof and façade aesthetic.



#### **Stronger and More Resilient**

Our systems are designed for maximum durability, many with service lives far surpassing that of competing systems.



### **Leak-Free Performance**

Products provide maximum protection from air, moisture and thermal infiltration — and are performance tested in our one-of-a-kind Sustainable Building Solutions Test Facility.



#### **Cost Effective for the Long Term**

A broad range of products can fit any project budget — but our energy efficiency and maintenance solutions can also help you ensure cost-effective ownership and operation for the long term.



#### **Better Insulated**

Industry-leading brands provide solutions for more efficient building construction and operation, and exceed strict energy codes for insulation.



#### **One Point of Contact**

Our products and systems are backed by industry-leading warranties — all from a single point of contact. We can also help with everything from asset management to diagnostics to installer training.



### **Leading Edge Sustainability**

Our building solutions help you meet green building standards like Net Zero, Living Building Challenge, Passive House and more.

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## TREMPROOF® 201/60

TREMproof® 201/60 is a high-solids, VOC compliant, modified polyurethane waterproofing membrane. It is a one-part moisture-curing elastomer available in three viscosities: Self-Leveling (SL), Roller (R) and Trowel. (Trowel for detailing work only).

### **Features & Benefits**

- TREMproof 201/60 is an economical choice for when construction schedules are not compressed.
- Compatible with Tremco sealants, coatings and expansion joints, which is essential for tie-ins, detailing and penetrations



TREMproof 201/60 is designed for use on backfilled walls, primarily on concrete and masonry.







## TREMPROOF® 260

TREMproof® 260 is a polymer-enhanced, single-component, fluid-applied, asphalt emulsion, below-grade waterproofing membrane.

#### **Features & Benefits**

- A cost-effective solution that can be applied to damp or green concrete allowing for application more quickly after forms are removed
- The ability to co-spray the material to speed the curing process allows for fast-tracking construction and reduces the potential for washout
- Monolithic asphaltic membrane protects seams and seals penetrations reducing time needed for detail work
- Exothermic reaction during concrete cure builds adhesion of the membrane to the structure, creating a bonded waterproofing assembly
- Extreme durability with exceptional elongation and crack-bridging

### **Common Applications**

Foundation walls, retaining walls, most backfilled applications — and in approved methane barrier applications. 4





### TREMPROOF® 250GC

TREMproof® 250GC is a cold fluid-applied elastomeric modified polyurethane waterproofing membrane that is rapid-curing, high solids, VOC-compliant and can be applied to damp/green concrete. It is a one-part moisture-curing elastomer available in self-leveling, roller and trowel (detail only) viscosities.

#### Features & Benefits

- Can be applied in as little as 24 hours following the removal of concrete forms, and applied to damp concrete, reducing delays.
- The unique ability to catalyze TREMproof 250GC SL with water speeds cure times, especially in cold temperatures and low relative humidity, to further condense the construction schedule.
- Can be applied at a rate of up to 120 mils in a single lift to speed application, or in multiple lifts to achieve a 215-mil, high-build system when maximum protection is required.

### **Common Applications**

Backfilled walls, split slab applications, planters and submerged conditions.







### TREMPROOF® PUMA

TREMproof® PUMA is a premium waterproofing system that utilizes polyurethane-methacrylate (PUMA) technology, offering superior elongation over traditional MMA/PMMA technology systems. Systems are composed of a primer (Tremco PUMA Primer) and a base coat (Tremco PUMA BC or BC LM), and cured using Tremco PUMA Initiator.

#### **Features & Benefits**

- Delivers extreme durability while maintaining excellent crack-bridging characteristics, eliminating the need for reinforcing fabric
- 30 to 45-minute cure time between coats: Giving the ability to proceed to overburden 1 hour after application.
- Can be applied at temperatures as low as 20 °F (-7 °C)
- Premium waterproofing system backed by an all-inclusive warranty

### **Common Applications**

Ideal for waterproofing concrete slabs, split-slab, paver systems, planters and vegetated roofs.







### TREMPROOF® 6100

TREMproof 6100® is a one-part, 100% solids, hot-applied, rubberized asphalt waterproofing membrane. TREMproof 6100 can be formulated with up to 25% recycled content. (Contact your local Tremco Sales Representative for additional information.)

### **Features & Benefits**

- Create a full system by combining the reinforcing layer and other components.
- Reliable technology with an extensive trusted history.



It is applied to horizontal concrete surfaces and is formulated exclusively for application to the top level of structures, including applications such as plaza decks, roof decks and unexposed top-level parking areas. Ideal for new and remedial waterproofing applications.







### TREMPROOF® 6100 BM

TREMproof® 6100BM is a hot-applied rubberized asphalt waterproofing membrane. The superior long-term integrity of TREMproof 6100BM helps it become an integral part of the total traffic system.

### **Features & Benefits**

- Designed for use under concrete or pavement, and becomes an integral part of the completed traffic coating systems
- Can be applied horizontally or vertically
- Protects occupied areas below against water intrusion

### **Common Applications**

Can be applied to horizontal or vertical concrete slabs and is designed for use on surfaces to be subsequently paved or concreted over to ultimately carry vehicular traffic.







### TREMPROOF™ AMPHIBIA™

TREMproof™ Amphibia™ waterproofing membrane is self-healing, self-sealing and self-repairing. It has three active layers - a watertight EPDM barrier, an active core with the ability to seal when penetrated and an active barrier which seals the overlap and helps resist lateral movement of water. A non-woven fabric layer promotes mechanical adhesion to concrete.

#### **Features & Benefits**

- Self-healing, self-sealing ability provides immediate protection & less time for repair work, including around nails and fasteners
- Active layer self-seals overlaps to resist lateral water migration
- Non-woven geotextile layer allows for integral adhesion to concrete
- Impermeable EPDM layer allows use in hydrostatic conditions
- Can be exposed to weather & construction elements

### **Common Applications**

Lagging/retaining walls in blindside applications, below slab-on-grade applications, buried forms like elevator pits, water tanks and more



### TREMPROOF™ 560A

TREMproof™ 560A is a self-adhesive waterproofing membrane specifically-designed for below grade waterproofing. The membrane is composed of SBS modified bitumen with a tri-laminated woven polyethylene facer. A silicone release paper protects the adhesive side of the membrane.

#### Features & Benefits

- Can be applied to damp and green concrete to accelerate construction
- Manufactured to a preset, uniform thickness for uniform coverage
- Highly-flexible material easily forms around corners and contours
- Available in both summer grade 50°F to 122°F (10°C to 50°C) and winter grades: 14°F to 104°F (-10°C to 40°C)

### **Common Applications**

Designed for poured concrete and CMU backfilled walls. TREMproof 560A is approved for use with Nudura® Insulated Concrete Forms (ICF).



### **PARASEAL®**

Paraseal® is a sheet waterproofing membrane consisting of 15 mils of HDPE and expandable, granular bentonite. The composite weight of the material is up to 1.0 lb/ft², creating a dual waterproofing system.

#### Features & Benefits

- The nature of the Paraseal also allows for installation over green or damp surfaces accelerating the construction process
- The bentonite can expand up to 8 times its original thickness to stop water that may make it past the HDPE layer, providing a second layer of protection



Paraseal is designed for use on backfilled walls, and can be used on damp or green concrete





### PARASEAL® LG

Paraseal® LG is a sheet waterproofing membrane consisting of 20 mils of HDPE, expandable, granular bentonite and a protective layer of spunbonded polyester. The composite weight of the material is up to 1.0 lb/ft², creating a dual waterproofing membrane.

#### **Features & Benefits**

- Combines HDPE and bentonite with a protective third layer of spunbond polyester to keep the membrane intact during the concrete pour or shotcrete application.
- Can installation over green or damp surfaces to speed construction.
- The bentonite can expand up to 8 times its original thickness to stop water that may make it past the HDPE layer.

### **Common Applications**

Designed for use over lagging on blindside walls, under slab, and buried forms such as elevator pits. Can also be used on backfilled walls.







### PARASEAL® GM

Parasesal® GM is a sheet waterproofing and methane-mitigating membrane consisting of 20 mils of HDPE and expandable, granular bentonite. The composite weight of the material is up to 1.0 lb/ft², creating a dual waterproofing system. The HDPE extends beyond the bentonite on the perimeter edges to create a clean surface for tape installation.

#### Features & Benefits

- Combines with Para JT Tape seam tape and Parastick 'n' Dry Tape to create a flexible, waterproof and methane-mitigating membrane.
- Allows for installation over green or damp surfaces accelerating the construction process.
- The bentonite can expand up to 8 times its original thickness to stop water that may make it past the HDPE layer.

### **Common Applications**

Designed for use in post-installation submerged conditions on backfilled walls. It may be used in under-slab and split-slab conditions.





# PARASEAL® GM 20MIL/PARASEAL® GM 60MIL

Parasesal® GM 20 mil and Parasesal® GM 20 mil are sheet waterproofing and methane-mitigating membranes consisting of 20 or 60 mils of HDPE, expandable, granular bentonite and a protective layer of spun-bonded polyester. The HDPE and bentonite create a dual waterproofing system.

#### Features & Benefits

- Combines with Para JT Tape seam tape and Parastick 'n' Dry Tape to create a flexible, waterproof and methane-mitigating membrane.
- Allows for installation over green or damp surfaces.
- The bentonite can expand up to 8 times its original thickness to stop water that may make it past the HDPE layer.

### **Common Applications**

Designed for post-installation use in submerged conditions, on blindside walls, and under slab where hydrostatic water head and/or methane conditions exist. Can be used on backfilled walls.







# TREMPROOF® DUAL WATERPROOFING SYSTEM

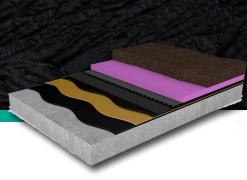
TREMproof® Dual Waterproofing System (DWS) is a dual membrane waterproofing system comprised of TREMproof TRA sheeting embedded into TREMproof 250GC. This unique waterproofing system is designed to have tenacious adhesion, long term durability, and remarkable chemical stability. The elastomeric properties of the system's components enable the complete assembly to withstand the most demanding waterproofing needs.



- Designed to withstand the most rigorous waterproofing conditions.
- Can be applied to damp or green concrete in as little as 24 hours after form removal (when using TREMproof 250GC)
- Can help fast track construction schedules, saving time and money
- Cold-applied membrane minimizes the need for special equipment



Can be used to waterproof plaza decks, terraces, backfilled walls, planters, split slabs and more.





# TREMPROOF® TRIPLE WATERPROOFING SYSTEM

TREMproof® Triple Waterproofing System (TWS) is a blindside and underslab triple-layer waterpoofing assembly consisting of 20 or 60 mils of HDPE, expandable granular bentonite and a protective layer of spunbonded polyester, coated with 60 dry mils of polymer-enhanced, liquid-applied asphalt membrane. This durable system creates a physical bond to concrete that eliminates the possibility of lateral water movement.

#### Features & Benefits

- Innovative triple-layer system, tested per ASTM standards
- Protected bentonite allows for longer exposure to the elements
- Monolithic asphaltic membrane protects seams and seals penetrations, reducing time required for detail work
- Extreme durability with exceptional elongation and crack-bridging



Blindside walls (Cast-in-place and shotcrete). Under-slab/below slab on grade. Hydrostatic conditions.





## PERMAQUIK® 200

Permaquik® 200 Crystalline Waterproofing is a capillary waterproofing formulation of proprietary blends of chemicals, quartz sand and cement. The chemicals in Permaquik 200 require the presence of moisture to set off a chemical reaction from within the concrete. When combined with "free lime", these chemicals form long-chained complexes, which crystallize and penetrate deeply into the concrete, eliminating the migration of water. Independent tests show penetration up to 2" (51 mm) in 28 days.

### Features & Benefits

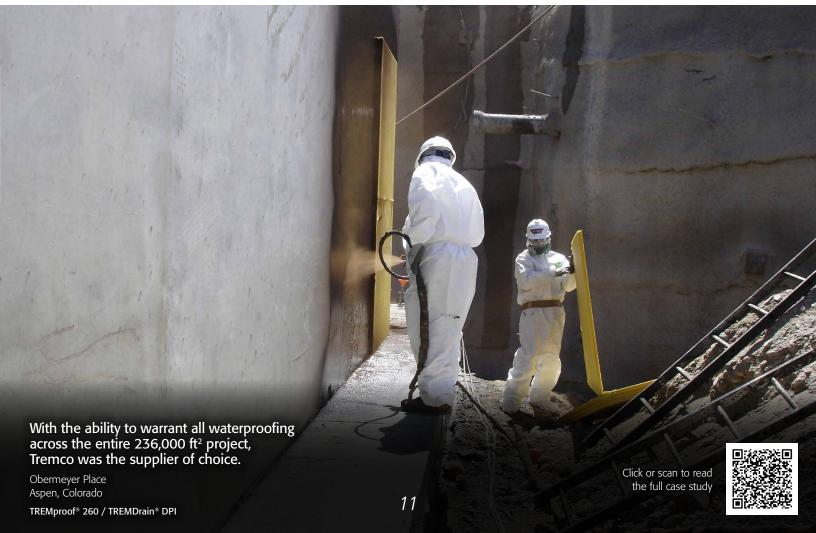
- Integrates and combines with the concrete from within, thus forming a barrier which cannot easily be damaged.
- Crystalline tolerates water, so there is no need to continually dry the surface before application many other systems.



Foundation walls and floor slabs, suspended or in-ground pools, and in parking garage floor applications.







## **DRAINAGE**

Drainage components, when incorporated, enhance the performance of the overall waterproofing system and reduce the amount of hydrostatic pressure and weight of watersaturated soil. Prefabricated drainage is engineered to create air space when applied over a membrane.

Tremco's TREMDrain® series of prefabricated drainage boards consists of a dimpled core which provides excellent water flow when under compaction. TREMDrain can be used for vertical and horizontal applications.

TREMDrain products are offered with a variety of combinations of filter fabrics, drainage cores, an optional protective polymeric film and a TotalDrain System to replace perforated pipe/aggregate collection systems. Tremco's TREMDrain series of drainage mats are compatible with TREMproof and Paraseal membranes.







### **TREMDrain®**

A two-layer drainage mat that consists of a polystyrene core and a spun-bonded polypropylene fabric.

### TREMDrain® 1000

This two-layer drainage mat consists of a polystyrene core and spun-bonded polypropylene fabric. It is available with or without the polymeric film attached to the back of the drainage core and offers great compressive strength.

### TREMDrain® 2000

A three-layer drainage mat that consists of a woven polypropylene fabric, polystyrene core and polymeric film. The woven fabric has great puncture resistance, making it ideal for horizontal applications where concrete will be poured on top of the drainage.

### TREMDrain® 3000

This two-part prefabricated drainage material and protection board consists of a formed polystyrene core covered on one side with a woven polypropylene filter fabric. This fabric allows water to pass into the drainage core while restricting the movement of soil particles. The plastic core provides compressive strength and moderate flow capacity.

### TREMDrain® 6000

A multi-composite prefabricated drainage material and protection board consisting of a formed polypropylene core covered on one side with a high-strength, spun-bonded polypropylene filter fabric. The fabric allows water to pass into the drainage core while filtering out fine particulates.

### TREMDrain® 6600

This multi-composite prefabricated drainage material and protection board consists of a formed polypropylene core covered on one side with a high strength, non-woven needle-punched polypropylene filter fabric heat-bonded to the core.

### TREMDrain® DPI

TREMDrain® DPI is an drainage, protection and insulation board for use with TREMproof® 260 Spray-Applied Waterproofing.

### TREMDrain® S

TREMDrain S consists of a spun-bonded polypropylene fabric, a polystyrene core and a polymeric film backing. It has the highest compressive strength in the TREMDrain series.

### TREMDrain® GS

A drainage mat consisting of a perforated polystyrene core with fabrics attached to both sides. Installed with the dimples down, the core also functions as a water retention layer.

### TREMDrain® QSP

This three-part prefabricated drainage panel/protection board consists of a formed, perforated polystyrene core, covered on the dimpled side with a non-woven, needle-punched polypropylene filter along with a breathable cross-hatched fabric on the reverse.

### TREMDrain® Total Drain

A two-layer drainage mat with a unique polystyrene core with a high-profile drainage section for water collection/flow and a transition section to connect to other TREMDrain drainage mats.

### **PROTECTION COURSES**



### Tremco® Elastomeric Sheeting

Provides a durable, flexible, tear-resistant bridge in areas of high movement such as expansion joints, construction joints and flashing where membrane waterproofing applications such as TREMproof® 6100, TREMproof 201/60 or TREMproof 250GC are being used.

### Tremco® HDPE Protection Courses

20-mil sheet that not only serves as a protection course but also acts as a vapor barrier in waterproofing applications. A 40-mil sheet prohibits aggressive growing roots from affecting the performance characteristics of a waterproofing membrane in planters and greenscape applications.

### POWERply® Standard Smooth

Smooth surfaced, modified bitumen sheet used in conjunction with recommended waterproofing membranes as an extremely heavy-duty protection course, primarily in horizontal applications.

### POWERply® Standard Smooth

A rough-surfaced, modified bitumen sheet used in conjunction with waterproofing membranes as an extremely heavy-duty protection course, primarily in horizontal applications.

### Tremco® 2550/2560

Tremco 2550 and 2560 are semi-flexible asphaltic sheets in 1/8" and 1/4", respectively. It consists of a core made from a blend of asphalt, plasticizer and inert fillers. This core is sandwiched between two skins of an asphalt-saturated fiberglass. This is then molded and formed under heat and pressure into sheets.

### Tremco® 2450

Extruded, hollow-core polypropylene/polyethylene copolymer with a standard thickness of 0.08" (2.2 mm).

### Tremco® Protection Mat

Ultra-lightweight, extremely tough 14-oz protection mat for waterproofing membranes in both vertical and horizontal applications. It is made of non-biodegradable polyester and can be installed within minutes over a cured membrane to give maximum protection against backfill, poured slabs and the traffic/work of other trades.

### REINFORCING MATERIALS

### Tremco® Elastomeric Sheeting

Provides a durable, flexible, tear-resistant bridge in areas of high movement such as expansion joints, construction joints and flashing where waterproofing membranes such as TREMproof® 6100, TREMproof 201/60 or TREMproof 250GC are being used.

### Tremco® Reinforcing Fabrics

Spun-bonded polyester fabric consisting of a nonwoven fabric of continuous filament polyester fibers that are randomly arranged. Fibers are highly-dispersed and bonded at the filament junctions.

### Tremco® 2011

An open-weave fabric consisting of glass fiber yarn saturated with synthetic resins. The glass fiber in this product will not rot, mildew or wick water into the body of the coating material.

### TREMproof® PUMA Flashing System

TREMproof® PUMA Flashing System is a quick-cure, liquid-applied system based on PUMA technology. This system cures within 30 minutes, even in temperature below freezing, and has tenacious adhesion to concrete and metal. TREMproof PUMA Flashing System is composed of a primer (Tremco PUMA Primer) and a UV stable base coat (Tremco PUMA Flashing). A top coat (Tremco PUMA TC) can be used when needed for aesthetic reasons. All components are cured using Tremco PUMA Initiator.

### Tremco® DualFlex®

Tremco DualFlex® is a reinforcing flashing that consists of a central strip of elastomeric SEBS rubber flanked on either side by an absorbent non-woven felt. The felt allows for easy integration of the flashing and the waterproofing membrane. The elastomeric SEBS rubber provides superior movement capability without compromising the waterproofing.

### **ACCESSORIES**



Dymonic 100 is a high-performance, medium-modulus, low-VOC, UV stable, non-sag polyurethane sealant. It is a durable, flexible sealant that offers excellent performance in moving joints and exhibits tenacious adhesion once fully-cured.

### Paraseal® Para JT™

Paraseal Para JT is an adhesive joint tape compound formulated with cross-linked polymeric elastomers. It can be combined with a Paraseal LG membrane in vapor-proofing installations for sealing around penetrations — or with Paraseal GM to create double seals on all joints.

### Paraseal® Paraboots

Paraboots are a series of 60-mil, high-density polyethylene prefabrricated covers designed to be used with Paraseal membranes to maintain a continuous waterproofing and gas mitigating system at tieback heads of the soil retention system.

### Paraseal® Paragranular™

Paragranular is a premium Wyoming-type, high-swelling, granular sodium bentonite. When in the presence of water, Paragranular reacts and forms an impervious waterproof gel. It is designed to work in conjunction with Paraseal products to form a waterproof transitional seal.

### Paraseal® Paramastic

An expandable mastic for use with Paraseal waterproofing membranes. It is used to protect against water leakage where penetrations, honeycombs, unfilled ties or spalled concrete exists.

### Paraseal® Paraterm™ Bar

When fastened through pre-cut holes, this aluminum alloy bar provides tight, straight and extremely long lived terminations, caulk troughs and drip edges.

### Paraseal® Permanent Seam Tape

A rubberized asphalt membrane laminated to a polyethylene reinforcing film. A removable release paper protects the adhesive membrane face until removed during installation. it is used for sealing the seams of Paraseal applications when flood testing is desired, on all seams of Paraseal Saltwater Grade applications and with Paraseal LG when installed for vapor-proofing.

### TREMproof® TRA Elastomeric Sheeting

A protective waterproofing course that is compounded from a blend of EPDM and SBR thermostat elastomers. This sheet is reinforced with a high-strength, polyester-woven scrim. It is designed to provide a durable, flexible, tear-resistant bridge in areas of high movement where cold and hot-applied membranes are being utilized.

### Ultraseal® P-201A

A high-performance hydro-reactive mastic for sealing and waterproofing passing bodies and cracks. It is a waterstop used in new construction and repair applications. It can be applied to damp and uneven surfaces and functions in a wide range of temperatures and ground water conditions

### Tremco® 10-Mil Class-A Vapor Barrier

Tremco® 10-Mil "Class A" Vapor Barrier is a reinforced polyethylene-based vapor barrier designed to prevent moisture and reduce harmful radon and methane gas from migrating through concrete slabs-on-grade.

Tremco Construction Products Group: A Complete Family of Products

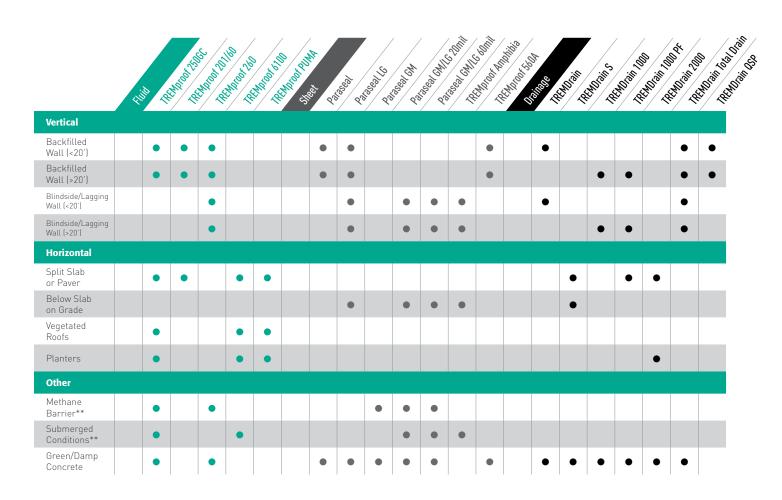
- Nudura<sup>™</sup> Insulated Concrete Form (ICF) Systems
- Dryvit<sup>™</sup> and Tremco<sup>®</sup> Flashing, and Air and Vapor Barrier Systems
- Willseal<sup>™</sup> Pre-Compressed Foam Expansion Joints
- Tremco Traffic Coating Systems, Sealants, Adhesives and Transition Assemblies
- Dryvit Coatings, Stains, Textured Finishes and Consinuous Insulation Systems





# WATERPROOFING AND DRAINAGE SELECTION GUIDE\*

### TREMproof®, Paraseal® and TREMDrain®



<sup>\*</sup> The Waterproofing and Drainage Selection Guide is to be used as a general reference and reflects two of the components that become integrated into a waterproofing system.

Please consult your local Tremco Manufacturer's Representative for regional recommendations based on your local building practices and warranty requirements.

Reference the current product data sheet on our website at **www.tremcosealants.com** for more specific product information.

For priming recommendations, please contact Tremco Technical Services or reference the Primer Guide on our web site.



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Tremco Construction Products Group (CPG) brings together Tremco Incorporated's Commercial Sealants & Waterproofing and Roofing & Building Maintenance operating divisions; Dryvit Systems, Inc.; Nudura Inc.; Willseal; Weatherproofing Technologies, Inc. and Weatherproofing Technologies Canada, Inc.

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<sup>\*\*</sup> Please consult your local Tremco Manufacturer's Representative for recommendations and approval of your specific application.

