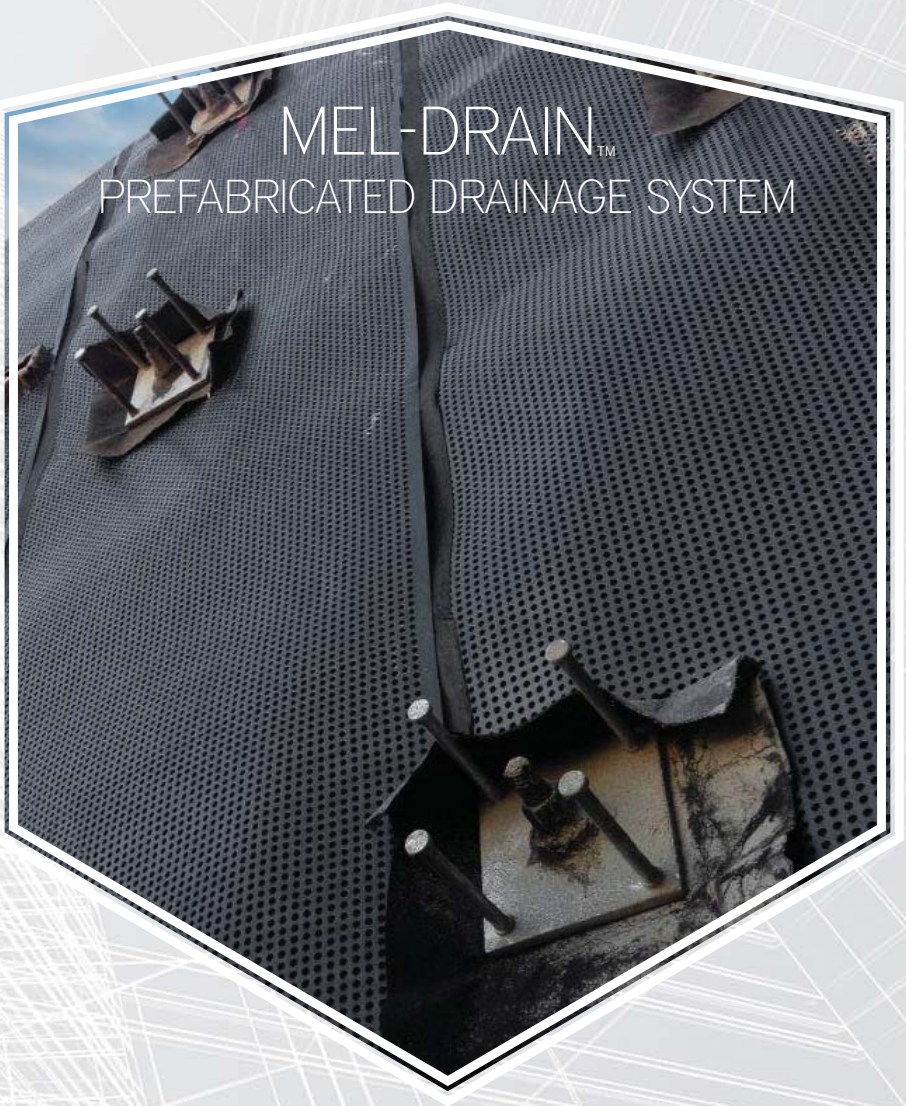
PROVIDING A
FULL BUILDING
ENVELOPE
SYSTEM

MEL-DRAIN™

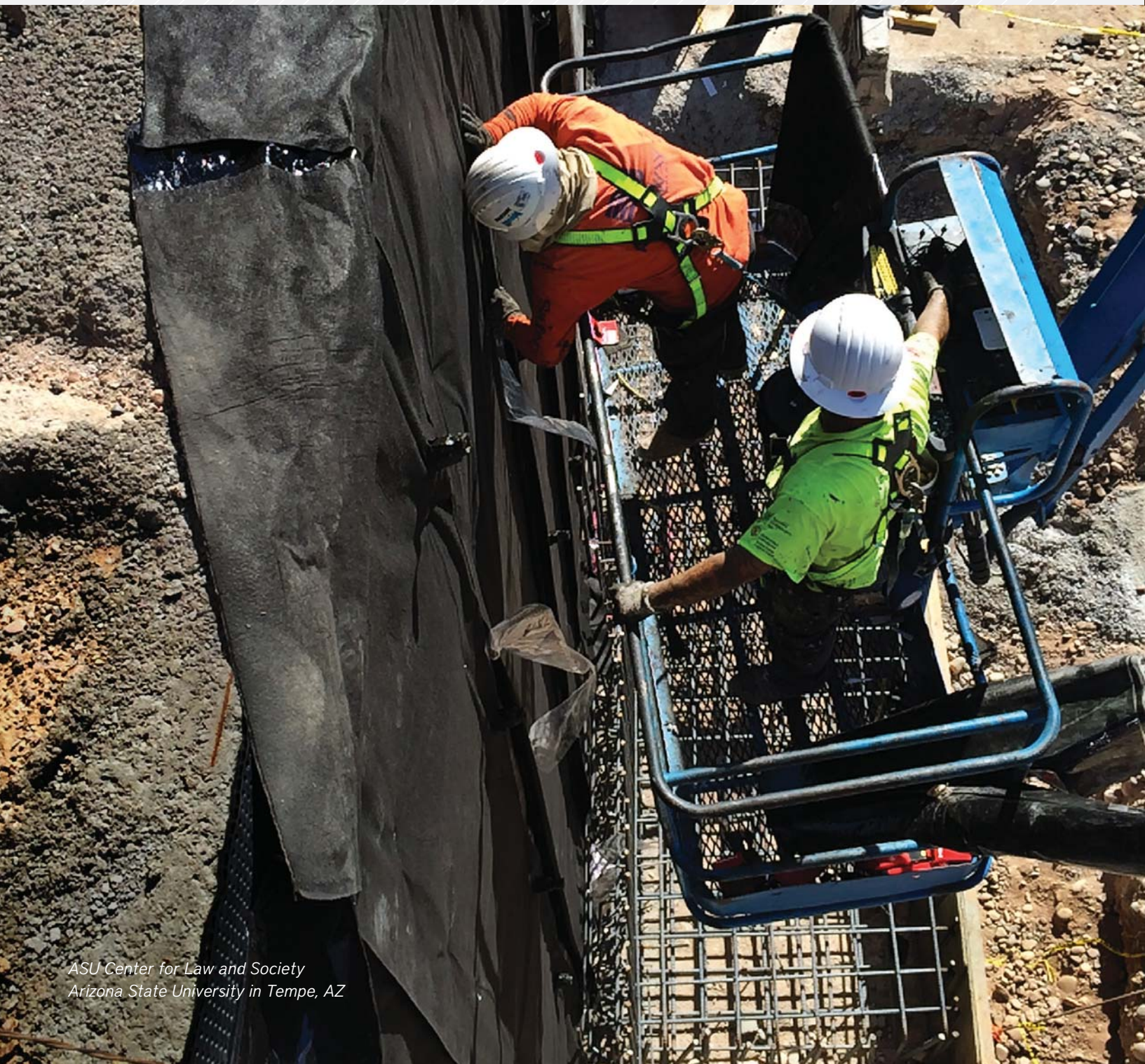
PREFABRICATED DRAINAGE SYSTEM



W. R. MEADOWS®
SEALTIGHT®
A Family Company Since 1926
QUALITY...SERVICE...INTEGRITY

FOR BEST PROTECTION

Combine MEL-DRAIN with all W. R. MEADOWS waterproofing materials to create a total moisture protection system



ASU Center for Law and Society
Arizona State University in Tempe, AZ

Central Region Elementary School #13 Parking Garage, Los Angeles

Gramercy, Las Vegas

Drainage plays a critical role in a complete moisture protection system. Native soil is typically comprised of multiple layers that determine the ability of water to move through the soil. Low permeability soil layers can trap water and create hydrostatic pressure against below grade walls.

MEL-DRAIN enhances our moisture protection systems. By design, MEL-DRAIN protects the membrane and provides an uninterrupted flow path to bypass the problem soil layers.

For architects, engineers, and design teams, keeping water out of a below-grade structure is important for maintaining indoor air efficiency, as well as helping to reduce the formation of mildew and mold. Whenever a below-grade waterproofing membrane is used, such as MEL-ROL from W. R. MEADOWS, MEL-DRAIN should also be used. The MEL-ROL and MEL-DRAIN system creates an effective waterproofing barrier that not only resists the intrusion of water, but also directs it away from the building towards reservoirs and water tanks.

Features/Benefits

- High flow capacity, without clogging/Relieves hydrostatic pressure buildup.
- High compressive strength/Dependable, long life performance.
- Easy to install; durable under job site conditions/Lower total installed cost.
- Chemically resistant to all naturally occurring soil conditions/Wide variety of applications.
- Provides added protection for waterproofing materials/Enhances waterproofing performance.
- Part of a complete W. R. MEADOWS moisture protection system/Worry-free, single-source solution.

Whatever Your Needs... We Have the Solution

MEL-DRAIN is a dimple-raised, molded polystyrene sheet bonded to high strength polypropylene fabric. This geocomposite allows the passage of moisture through the fabric while preventing fine soils from entering the drainage channel. Various drain designs are available, depending on soil pressure and flow specifications. (An optional polyester backing film is available when used in conjunction with flexible waterproofing material.) The family of MEL-DRAIN products provides excellent protection in vertical, horizontal, and site applications.

Used in conjunction with a total W. R. MEADOWS moisture protection system, MEL-DRAIN is the ideal choice for a prefabricated drainage system.

- Commercial buildings
- Underground parking
- Retaining walls
- Basement walls
- Site drainage
- Plaza decks
- Earth-sheltered homes

In fact, whenever a waterproofing membrane from W. R. MEADOWS is used, MEL-DRAIN should be applied as well to create a continuous prefabricated drainage system.

COMPATIBLE WITH MEL-DRAIN

A proper installation of any of these products is not complete without the use of MEL-DRAIN.

MEL-DRAIN is compatible with the entire line of W. R. MEADOWS waterproofing membranes. In fact, every effective waterproofing application should utilize MEL-DRAIN to help direct water away from foundation walls, ensuring a complete moisture protection system. The following waterproofing membranes from W. R. MEADOWS are fully compatible with MEL-DRAIN:

MEL-PRIME™

Adhesive

MEL-PRIME is a solvent-based, ready-to-use adhesive designed for use with W. R. MEADOWS membrane systems, such as PRECON. MEL-PRIME simultaneously prepares and dustproofs new, old, vertical and horizontal surfaces in one easy, economical operation. Several different formulations are available, such as water-based and low-VOC.

MEL-ROL LM

Single-Component, Water-Based, Polymer-Modified, Cold-Applied, Waterproofing Membrane

MEL-ROL LM is a single-component, polymer-modified, cold-applied, water-based, liquid waterproofing membrane ideal for below-grade vertical seamless waterproofing applications. We have taken the same high quality rubber polymers found in W. R. MEADOWS successful MEL-ROL "peel and stick" membrane and converted them into a heavy-bodied, high solids, quick drying liquid membrane.

MEL-ROL®

Rolled, Self-Adhering Waterproofing Membrane

MEL-ROL waterproofing system is a flexible, versatile, dependable, roll-type waterproofing membrane. It is composed of a nominally 56 mil thick layer of polymeric waterproofing membrane on a heavy duty, four-mil thick, cross-laminated polyethylene carrier film. The two components are laminated together under strict quality-controlled production procedures.

POINTING MASTIC

Cold-Applied, Single-Component Polymeric Sealing Compound

POINTING MASTIC is a pre-mixed, cold-applied, polymeric, single-component sealing compound for adhesive bonding of MEL-DRAIN. It offers excellent cohesive and adhesive qualities. Once applied, it provides excellent adhesive and bonding strengths. POINTING MASTIC cures to form a tough, flexible membrane.

Sharp Rees-Stealy Medical Center, San Diego

Gramercy, Las Vegas

HYDRALASTIC™ 836

Cold-Applied, Single-Component Waterproofing

HYDRALASTIC 836 is a cold-applied, solvent-free, single-component waterproofing compound. It does not shrink, has a low volatile organic compound (VOC) content, and has a very low odor. It will not crack in extreme cold or slump due to softening at high temperatures.

PRECON®

Pre-Applied/Underslab Waterproofing Membrane

PRECON is a composite sheet membrane comprised of a non-woven fabric, elastomeric membrane, and W. R. MEADOWS' exclusive, patented plasmatic core (U.S. Patent No. 7,179,761). The plasmatic core is a seven-layer matrix designed for toughness and provides the lowest water vapor transmission (WVT) rating on the market. Once concrete is poured against PRECON and the concrete cures, a mechanical bond forms that secures the concrete to the membrane.

HYDRASTOP™ SA

Pre-Applied Waterproofing Membrane

HYDRASTOP SA is a composite, self-adhered sheet membrane comprised of a non-woven fabric, elastomeric membrane, and coated release paper. Once concrete is poured against HYDRASTOP SA and the concrete cures, a mechanical bond forms that secures the concrete to the membrane. The HYDRASTOP SA system is comprised of the HYDRASTOP SA membrane as well as MEL-DRAIN™ composite drainage board from W. R. MEADOWS.

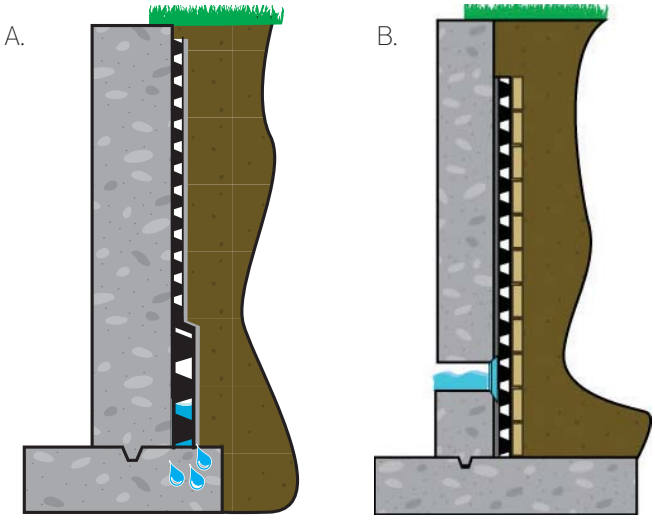
HRM 714

Hot-Applied Rubberized Waterproofing Membrane

HRM 714 hot-applied rubberized asphalt waterproofing membrane is a 100% solids blend of asphalts, synthetic rubber polymers, and filler formulated to provide toughness with flexibility and low moisture vapor permeance.

MEL-DRAIN COMPATIBILITY CHART

Drainage Application Chart for vertical and horizontal use.

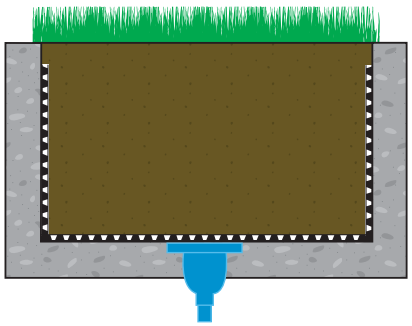


A. BACKFILLED WALLS

MEL-ROL	MEL-DRAIN 5012/5035
MEL-ROL LM	MEL-DRAIN 5012-B/5035-B
HYDRALASTIC 836	MEL-DRAIN 5012-B/5035-B

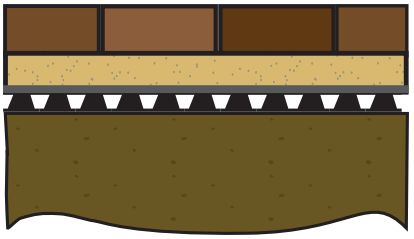
B. BLINDSIDE WALLS

HYDRALASTIC 836	MEL-DRAIN 5035
PRECON	MEL-DRAIN 5035



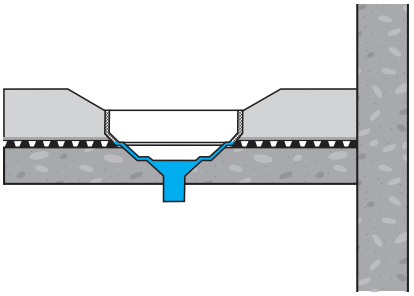
PLANTERS

HYDRALASTIC 836	MEL-DRAIN 9055-B



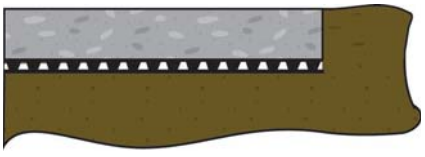
PLAZA DECKS

PRECON	MEL-DRAIN 9055
MEL-ROL	MEL-DRAIN 9055
HRM 714	MEL-DRAIN 9055-B
HYDRALASTIC 836	MEL-DRAIN 9055-B



SPLIT SLAB

PRECON	MEL-DRAIN 9055
HRM 714	MEL-DRAIN 9055
HYDRALASTIC 836	MEL-DRAIN 9055-B
MEL-ROL	MEL-DRAIN 9055-B



UNDER SLABS

PRECON	MEL-DRAIN 5035

MEL-DRAIN TECHNICAL DATA

With MEL-DRAIN, you'll always get the right product to fit the needs of your job.

W. R. MEADOWS offers a complete line of MEL-DRAIN prefabricated drainage products that will enhance and extend the performance life of your waterproofing membrane. By design, MEL-DRAIN products not only protect the membrane from installation stresses, but will also eliminate hydrostatic pressure from accumulating by providing an uninterrupted flow path for water to bypass problem soil layers. MEL-DRAIN sheet products combined with MEL-DRAIN TOTAL-DRAIN work together as a complete drainage system that offers unmatched protection and performance.

MEL-DRAIN PRODUCTS			5012	5035	9072	9055	7955	MEL-DRAIN TOTAL-DRAIN
			5012-B	5035-B	9072-B	9055-B	7955-B	MEL-DRAIN TOTAL-DRAIN-B
Physical Properties[1]	**ASTM Test Method**	**Unit of Measure**						
FABRIC								
Material [2]			PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, WM	PP, NPNW
Water Flow Rate	D 4491	gpm/ft^2	165	165	90	90	145	150
		Lpm/m^2	6,724	6,724	3,668	3,668	5,907	6,113
Grab Tensile Strength	D 4632	lbs	100	100	205	205	365 x 200	115
		N	445	445	912	912	1624 x 890	512
CBR Puncture	D 6241	lbs	275	275	600	600	675	320
		kN	1.22	1.22	2.66	2.66	3.00	1.41
Apparent Opening Size	D 4751	sieve	70	70	80	80	40	70
		mm	0.210	0.210	0.177	0.177	0.43	0.21
Grab Elongation	D 4632	%	65	65	70	70	24 x 10	70
Permittivity	D 4491	sec^{-1}	2.4	2.4	1.5	1.5	2.1	2.4
UV Resistance	D 4355	% / 500 Hrs	70	70	70	70	90	70
CORE								
Material [2]			HIPS	HIPS	HIPS	HIPS	PP	HIPS
Thickness	D 1777	in	0.25	0.44	0.25	0.44	0.40	0.44/1.0
		mm	6.35	11	6.35	11	10	11/25.4
Compressive Strength	D 1621	psf	11,000	15,000	30,000	18,000	18,000	9,000
		kPa	527	718	1,436	862	862	431
Flow Rate[3]	D 4716	gpm/ft	12.5	17	13	21	21	80
		Lpm/m	155	211	161	261	261	994
COMPOSITE								
Recycled Content[4]		%	70	75	65	65	70	80, 75-B
Roll Size		ft	4×50	4×50	4×50	4×50	6×50	2×50
Roll Weight		lbs	28, 29-B	38, 39-B	49, 50-B	53, 50-B	73, 74-B	27, 28-B

[1] Unless otherwise noted, all physical and performance properties listed are Typical Values as defined in ASTM D 4439. [2] PP = Polypropylene; HIPS = High Impact Polystyrene; NPNW = Needle-Punched Nonwoven; WM = Woven Monofilament. [3] In-plane flow rate measured at 3,600 psf (172 kPa) compressive load and a hydraulic gradient of 1.0. [4] Post-industrial recycled content by weight. "-B" products include a polymeric backing film.

W. R. MEADOWS offers MEL-DRAIN products with AASHTO Classified Geotextiles. All technical information contained in this document is accurate as of time of publishing. W. R. MEADOWS reserves the right to make changes to products and literature without notice. For more detailed information, please request specific MEL-DRAIN model.

MEL-DRAIN TECHNICAL DATA

MEL-DRAIN products for civil applications.

MEL-DRAIN is also approved by many U.S. state departments of transportation. Be assured that these states have rigorously tested MEL-DRAIN for all their waterproofing and water drainage applications.

MEL-DRAIN AASHTO-classified DOT product information is below, showing the different market applications and product solutions.

MEL-DRAIN PRODUCTS			6012	7012	7015	7055
Physical Properties[1]	**ASTM Test Method**	**Unit of Measure**	**Typical Values**	**Typical Values**	**Typical Values**	**Typical Values**
FABRIC						
Material [2]			PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW
Water Flow Rate	D 4491	gpm/ft^2	150	110	110	110
		Lpm/m^2	6,113	4,483	4,483	4,483
Grab Tensile Strength	D 4632	lbs	130	160	160	160
		N	578	712	712	712
CBR Puncture	D 6241	lbs	360	450	450	450
		kN	1.55	2	2	2
Apparent Opening Size	D 4751	sieve	70	70	70	70
		mm	0.210	0.210	0.210	0.210
Grab Elongation	D 4632	%	70	70	70	70
Permittivity	D 4491	sec^{-1}	2.4	1.8	1.8	1.8
UV Resistance	D 4355	% / 500 Hrs	70	70	70	70
Survivability	AASHTO M 288-06	Class	3	2	2	2
CORE						
Material [2]			HIPS	HIPS	HIPS	HIPS
Thickness	D 5199	in	0.25	0.25	0.44	0.44
		mm	6.35	6.35	11	11
Compressive Strength	D 6364	psf	9,000	9,000	11,000	18,000
		kPa	431	431	527	862
	D 1621	psf	9,000	9,000	11,000	18,000
		kPa	431	431	527	862
Flow Rate[3]	D 4716	gpm/ft	12.5	12.5	18	21
		Lpm/m	155	155	223	261
Perforated			No	No	No	No
Backing Film			No	No	No	No
COMPOSITE						
Recycled Content[4]		%	>70	>65	>70	>70
Roll Size		ft	4×50	4×50	4×50	4×50
Roll Weight		lbs	29	32	43	50

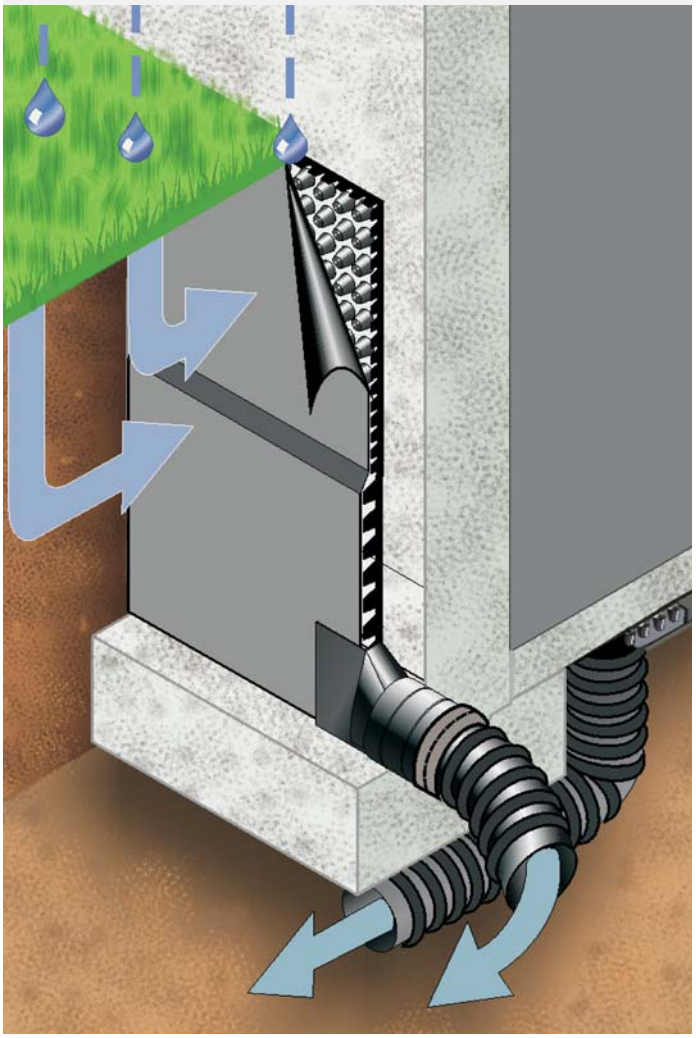
[1] Unless otherwise noted, all physical and performance properties listed are Typical Values as defined in ASTM D 4439. [2] PP = Polypropylene; HIPS = High Impact Polystyrene; NPNW = Needle-Punched Nonwoven; WM = Woven Monofilament [3] In-plane flow rate measured at 3,600 psf (172 kPa) compressive load and a hydraulic gradient of 1.0. [4] Post-industrial recycled content by weight.

MEL-DRAIN
TOTAL-DRAIN
SYSTEM

Create a true system which makes installations cost-efficient and timely.

The MEL-DRAIN TOTAL-DRAIN™ system combines any regular MEL-DRAIN sheet drain section with the unique TOTAL-DRAIN section. In the TOTAL-DRAIN system, the regular sheet drain performs its normal function of water collection, while the TOTAL-DRAIN section provides both water collection and a high-profile section for water flow to the designed drainage exits.

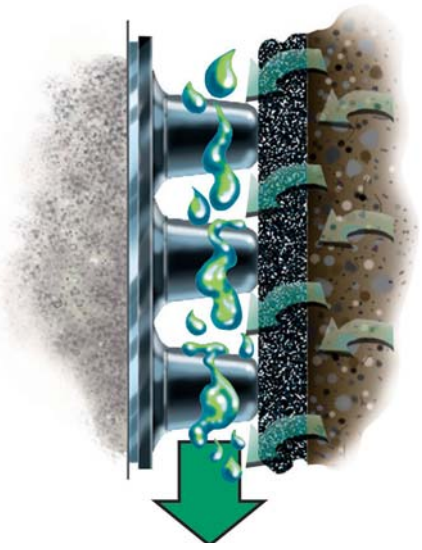
TOTAL DRAIN COLLECTION SYSTEM



The TOTAL-DRAIN system provides three advantages over the use of perforated pipe and stone.

- The high-profile flow section has a larger open area than does perforated pipe to accept high flows from the sheet drain and surrounding soil.
- The TOTAL-DRAIN section, with its manufactured transition between sheet drain and high-profile section, provides a secure flow path, which is not dependent on field installation.
- The system is fast and easy to install. Eliminates select backfill required to give perforated pipe strength. Standard connectors and corner guards are available.

MEL-DRAIN TOTAL DRAIN PRODUCT



water entering a drainage core

Vons, San Diego

Pomona College Studio Art Hall
Claremont, California

MEL-DRAIN is simply unrolled onto the wall or waterproofing material. POINTING MASTIC or MEL-PRIME™ from W. R. MEADOWS can be used to adhere MEL-DRAIN to the substrate. MEL-DRAIN is easily cut with construction knives or scissors and compatible in both vertical and horizontal applications. Make sure to request free samples before the start of your project.

MEL-DRAIN storage and handling directions

For storage of MEL-DRAIN at the job site and in the warehouse, please follow these requirements.

- Care must be taken during unloading process to ensure materials are not damaged.
- Materials shall remain in original packaging until time of installation.
- Store materials in protected environment until time of installation.
- Materials not shipped in UV-resistant bags must be stored indoors or under separate UV-protective cover to protect materials from exposure to direct sunlight.
- UV-resistant bagged materials may be stored in outdoor UV-exposed environments for a cumulative maximum of 180 days.
- Limit unpackaged material UV exposure to a cumulative maximum of 14 days during installation.
- Do not install materials during high wind events.
- Do not install materials when ambient temperatures are below 20° F (-6.7° C) or above 100° F (37.8° C).
- Do not expose materials to chemicals that are strong acids, strong bases, or high in solvents content.
- Protect materials from damaging due to flames, on-site construction and other environmental conditions.

Vons, San Diego

LEED INFO

MEL-DRAIN is made with recyclable material and can contribute to many LEED credits.

More and more often today, earning LEED credits is a critically important part of the job. To that end, W.R. MEADOWS stands ready to help, not only with recyclable material, but with support and advice on effective prefabricated drainage systems. Visit our website, and you'll find a LEED Credit Calculator. We also offer AIA-accredited lunch-and-learn programs. At W. R. MEADOWS, we always stand ready to help our contractor customers.

MEL-DRAIN and MEL-DRAIN TOTAL-DRAIN LEED CREDITS

LEED 2009 (v3.0)

SSc6.1: Stormwater Design – Quantity Control
SSc6.2: Stormwater Design – Quality Control
WEc1: Water-Efficient Landscaping
WEc2: Innovative Wastewater Technologies
EAc1: Optimize Energy Performance
MRc2: Construction Waste Management
MRc4: Recycled Content
MRc5: Regional Materials
IEQc3.1: Construction Indoor Air Quality Management Plan – During Construction
IEQc7.1: Thermal Comfort – Design

LEED v4.0

EAp2: Minimum Energy Performance
EAc2: Optimize Energy Performance
MRc9: Construction and Demolition Waste Management

MEL-DRAIN products do not contain any Red List Materials or Chemicals; per LBC v3.0, Materials Petal, Imperative 10.

Sharp Rees - Stealy Medical Center, San Diego

Guardian of the Structure

W. R. MEADOWS®

SEALTIGHT®

A Family Company Since 1926

QUALITY...SERVICE...INTEGRITY

Visit our site for comprehensive information on waterproofing a building:

- Product Listings
- Product Brochures
- Application Details
- Information Pages
- Installation Instructions
- Guide Specs
- Video Guides
- LEED Credit Calculation

wrmeadows.com

Use our LEED Credit Calculator:

Determine LEED credits for documentation during the design stage and for submission upon project completion.

calculator.wrmeadows.com

Download the pdf

Controlling Moisture Movement in Buildings: The Complete Approach. Get a full explanation of how moisture moves in buildings.

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