

# SITEDRAIN™

PREFABRICATED DRAINS



**AWD**  
AMERICAN WICK DRAIN



## PRODUCT NAME BREAKDOWN

Core Compressive  
Strength



183



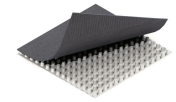
Geotextile  
Weight

**AMERICAN WICK DRAIN (AWD)** provides high quality subsurface drainage solutions, leveraging decades of expertise in commercial, government and residential applications. Our optimized system and innovative product line combine geotextiles and specially designed drainage cores. From retaining walls, concrete slabs, trench drains, and athletic fields, AWD is the trusted name working below the surface to ensure the surrounding earth is dry, solid and secure. AWD prefabricated drains provide an engineered response to a variety of drainage problems by collecting and redirecting water away from a structure or site.

We manufacture an extensive line of our AWD SITEDRAIN products to mitigate subsurface drainage for a broad range of construction applications. Our prefabricated drains consist of formed three-dimensional polymeric cores combined with a geotextile. The core offers strength to withstand soil pressure and provides a secure flow channel for collected water. The geotextile retains soil particles while allowing water to freely enter the drainage core. Our sheet, strip, combination and wick drains provide an engineered response to your drainage problem.

AWD SITEDRAIN products are manufactured to meet ASTM standard physical and mechanical properties. Design considerations typically include three basic physical properties: water flow rate, core compressive strength and ability of the geotextile to filter soil particles. Please visit our website for more information.

# SITEDRAIN™ PREFABRICATED SHEET DRAINS



SITEDRAIN Sheet prefabricated drains combine a formed polymeric drainage core with a filter fabric bonded to one side. The filter fabric is bonded to each dimple to prevent soil intrusion into the core flow channels while allowing water to freely enter the drain core. The core provides an uninterrupted path for water to flow to designated drainage exits.

SITEDRAIN Sheet Drains are an economical solution for subsurface, single-sided drainage applications. SITEDRAIN prefabricated sheet drains are manufactured to meet various compressive strengths and flow capacities and are available with filter fabrics meeting AASHTO M 288-06 specifications.

PROPERTY <sup>1</sup>	TEST METHOD	UNIT OF MEASURE	93	94	96	98	113	114	116	118	183	184	184-T	186	186-W	188	303	304	306	308
<b>GEOTEXTILE</b>																				
Material <sup>2</sup>			PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, WM	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW
Survivability	AASHTO M288	-	-	3	2	1	-	3	2	1	-	3	3	2	-	1	-	3	2	1
Grab Tensile Strength	ASTM D4632	lbs	100	135	195	245	100	135	195	245	100	135	150	195	430 x 240	245	100	135	195	245
		N	445	601	867	1,090	445	601	867	1,090	445	601	667	867	1,914 x 1,068	1,090	445	601	867	1,090
Grab Elongation	ASTM D4632	%	70	60	60	60	70	60	60	60	70	60	50	60	30 x 15	60	70	60	60	60
CBR Puncture Strength	ASTM D6241	lbs	305	365	505	580	305	365	505	580	305	365	295	505	800	580	305	365	505	580
		kN	1,356	1,624	2,246	2,580	1,356	1,624	2,246	2,580	1,356	1,624	1,312	2,246	3,560	2,580	1,356	1,624	2,246	2,580
UV Resistance	ASTM D4355	% / 500 Hrs	70	70	70	70	70	70	70	70	70	70	70	70	90	70	70	70	70	70
Apparent Opening Size <sup>3</sup>	ASTM D4751	sieve	70	70	70	80	70	70	70	80	70	70	80	70	50	80	70	70	70	80
		mm	0.212	0.212	0.212	0.180	0.212	0.212	0.212	0.180	0.212	0.212	0.180	0.212	0.300	0.180	0.212	0.212	0.212	0.180
Permittivity	ASTM D4491	sec <sup>-1</sup>	2.7	2.4	2.1	1.8	2.7	2.4	2.1	1.8	2.7	2.4	1.0	2.1	2.7	1.8	2.7	2.4	2.1	1.8
Water Flow Rate	ASTM D4491	gpm/ft <sup>2</sup>	165	175	155	135	165	175	155	135	165	175	70	155	195	135	165	175	155	135
		Lpm/m <sup>2</sup>	6,724	7,130	6,315	5,501	6,724	7,130	6,315	5,501	6,724	7,130	2,850	6,315	7,944	5,501	6,724	7,130	6,315	5,501
<b>CORE</b>																				
Material <sup>2</sup>			HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS
Compressive Strength	ASTM D6364	psf	9,000	9,000	9,000	9,000	11,000	11,000	11,000	11,000	18,000	18,000	18,000	18,000	18,000	18,000	30,000	30,000	30,000	30,000
	ASTM D1621	kPa	431	431	431	431	527	527	527	527	862	862	862	862	862	862	862	862	862	862
Thickness	ASTM D1777	in	0.25	0.25	0.25	0.25	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.25	0.25	0.25	0.25
		mm	6.35	6.35	6.35	6.35	10	10	10	10	10	10	10	10	10	10	6.35	6.35	6.35	6.35
In-Plane Flow Rate <sup>4</sup>	ASTM D4716	gpm/ft	12	12	12	12	18	18	18	18	21	21	21	21	21	21	13	13	13	13
		Lpm/m	149	149	149	149	224	224	224	224	261	261	261	261	261	261	161	161	161	161

<sup>1</sup> Unless otherwise noted, all physical and performance properties listed are Typical Value or Minimum Average Roll Value (MARV) as defined in ASTM D4439.

<sup>2</sup> PP = Polypropylene; NPNW = Needle-Punched Nonwoven; SBNW = Spunbonded Nonwoven; WM = Woven Monofilament

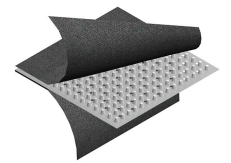
<sup>3</sup> Values for AOS represent Maximum Average Roll Value (MaxARV).

<sup>4</sup> In-plane flow rate measured at 3,600 psf (172 kPa) compressive load and a hydraulic gradient of 1.0.

All technical information contained in this document is accurate as of publication. AWD reserves the right to make changes to products and literature without notice. Please refer to our website for the most current technical information available.



# SITEDRAIN™ PREFABRICATED DS-SHEET DRAINS



SITEDRAIN DS-Sheet Drain prefabricated products combine a formed and perforated polymeric drainage core with a filter fabric bonded to both sides. The filter fabric is bonded securely to prevent soil intrusion into the core flow channels while allowing water to freely enter the drain core. The core provides an uninterrupted path for water to flow to designated drainage exits.

SITEDRAIN DS-Sheet Drains are an economical solution for subsurface, double-sided drainage applications. SITEDRAIN DS-Sheet Drains are manufactured to meet various compressive strengths and flow capacities and are available with filter fabrics meeting AASHTO M 288-06 specifications.

PROPERTY <sup>1</sup>	TEST METHOD	UNIT OF MEASURE	DS-93	DS-94	DS-96	DS-98	DS-113	DS-114	DS-116	DS-118	DS-183	DS-184	DS-186	DS-188	DS-303	DS-304	DS-306
<b>GEOTEXTILE</b>																	
Material <sup>2</sup>			PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW
Survivability	AASHTO M288	-	-	3	2	1	-	3	2	1	-	3	2	1	-	3	2
Grab Tensile Strength	ASTM D4632	lbs	100	135	195	245	100	135	195	245	100	135	195	245	100	135	195
		N	445	601	867	1,090	445	601	867	1,090	445	601	867	1,090	445	601	867
Grab Elongation	ASTM D4632	%	70	60	60	60	70	60	60	60	70	60	60	60	70	60	60
CBR Puncture Strength	ASTM D6241	lbs	305	365	505	580	305	365	505	580	305	365	505	580	305	365	505
		kN	1,356	1,624	2,246	2,580	1,356	1,624	2,246	2,580	1,356	1,624	2,246	2,580	1,356	1,624	2,246
UV Resistance	ASTM D4355	% / 500 Hrs	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
Apparent Opening Size <sup>3</sup>	ASTM D4751	sieve	70	70	70	80	70	70	70	80	70	70	70	80	70	70	70
		mm	0.212	0.212	0.212	0.180	0.212	0.212	0.212	0.180	0.212	0.212	0.212	0.180	0.212	0.212	0.212
Permittivity	ASTM D4491	sec <sup>-1</sup>	2.7	2.4	2.1	1.8	2.7	2.4	2.1	1.8	2.7	2.4	2.1	1.8	2.7	2.4	2.1
Water Flow Rate	ASTM D4491	gpm/ft <sup>2</sup>	165	175	155	135	165	175	155	135	165	175	155	135	165	175	155
		Lpm/m <sup>2</sup>	6,724	7,130	6,315	5,501	6,724	7,130	6,315	5,501	6,724	7,130	6,315	5,501	6,724	7,130	6,315
<b>CORE</b>																	
Material <sup>2</sup>			HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS
Compressive Strength	ASTM D6364	psf	9,000	9,000	9,000	9,000	11,000	11,000	11,000	11,000	18,000	18,000	18,000	18,000	30,000	30,000	30,000
	ASTM D1621	kPa	431	431	431	431	527	527	527	527	862	862	862	862	862	862	862
Thickness	ASTM D1777	in	0.25	0.25	0.25	0.25	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.25	0.25	0.25
		mm	6.35	6.35	6.35	6.35	10	10	10	10	10	10	10	10	6.35	6.35	6.35
In-Plane Flow Rate <sup>4</sup>	ASTM D4716	gpm/ft	12	12	12	12	18	18	18	18	21	21	21	21	13	13	13
		Lpm/m	149	149	149	149	224	224	224	224	261	261	261	261	161	161	161

<sup>1</sup> Unless otherwise noted, all physical and performance properties listed are Typical Value or Minimum Average Roll Value (MARV) as defined in ASTM D4439.

<sup>2</sup> PP = Polypropylene; NPNW = Needle-Punched Nonwoven; HIPS = High Impact Polystyrene

<sup>3</sup> Values for AOS represent Maximum Average Roll Value (MaxARV).

<sup>4</sup> In-plane flow rate measured at 3,600 psf (172 kPa) compressive load and a hydraulic gradient of 1.0.

All technical information contained in this document is accurate as of publication. AWD reserves the right to make changes to products and literature without notice. Please refer to our website for the most current technical information available.



# SITEDRAIN™ PREFABRICATED CHIMNEY DRAINS



SITEDRAIN Chimney Drain prefabricated products are constructed by fully wrapping a special width perforated polymeric drainage core with a nonwoven filter fabric. The filter fabric is bonded securely and prevents soil intrusion into the flow channels while allowing water to freely enter the drain core from both sides. The core provides an uninterrupted path for water to flow to designated drainage exits.

SITEDRAIN Chimney Drains are available in 12", 18" and 24" widths and provide a time saving, effective solution for reducing hydrostatic pressure in applications where full wall drain coverage is not required or feasible. SITEDRAIN Chimney Drains are manufactured to meet various compressive strengths and flow capacities and are available with filter fabrics meeting AASHTO M 288-06 specifications.

PROPERTY <sup>1</sup>	TEST METHOD	UNIT OF MEASURE	C-94	C-96	C-98	C-114	C-116	C-118	C-184	C-186	C-188	C-304	C-306	C-308
<b>GEOTEXTILE</b>														
Material <sup>2</sup>			PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW
Survivability	AASHTO M288	-	3	2	1	3	2	1	3	2	1	3	2	1
Grab Tensile Strength	ASTM D4632	lbs	135	195	245	135	195	245	135	195	245	135	195	245
		N	601	867	1,090	601	867	1,090	601	867	1,090	601	867	1,090
Grab Elongation	ASTM D4632	%	60	60	60	60	60	60	60	60	60	60	60	60
CBR Puncture Strength	ASTM D6241	lbs	365	505	580	365	505	580	365	505	580	365	505	580
		kN	1,624	2,246	2,580	1,624	2,246	2,580	1,624	2,246	2,580	1,624	2,246	2,580
UV Resistance	ASTM D4355	% / 500 Hrs	70	70	70	70	70	70	70	70	70	70	70	70
Apparent Opening Size <sup>3</sup>	ASTM D4751	sieve	70	70	80	70	70	80	70	70	80	70	70	80
		mm	0.212	0.212	0.180	0.212	0.212	0.180	0.212	0.212	0.180	0.212	0.212	0.180
Permittivity	ASTM D4491	sec <sup>-1</sup>	2.4	2.1	1.8	2.4	2.1	1.8	2.4	2.1	1.8	2.4	2.1	1.8
Water Flow Rate	ASTM D4491	gpm/ft <sup>2</sup>	175	155	135	175	155	135	175	155	135	175	155	135
		Lpm/m <sup>2</sup>	7,130	6,315	5,501	7,130	6,315	5,501	7,130	6,315	5,501	7,130	6,315	5,501
<b>CORE</b>														
Material <sup>2</sup>			HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS
Compressive Strength	ASTM D6364	psf	9,000	9,000	9,000	11,000	11,000	11,000	18,000	18,000	18,000	30,000	30,000	30,000
	ASTM D1621	kPa	431	431	431	527	527	527	862	862	862	862	862	862
Thickness	ASTM D1777	in	0.25	0.25	0.25	0.4	0.4	0.4	0.4	0.4	0.4	0.25	0.25	0.25
		mm	6.35	6.35	6.35	10	10	10	10	10	10	6.35	6.35	6.35
In-Plane Flow Rate <sup>4</sup>	ASTM D4716	gpm/ft	12	12	12	18	18	18	21	21	21	13	13	13
		Lpm/m	149	149	149	224	224	224	261	261	261	161	161	161

<sup>1</sup> Unless otherwise noted, all physical and performance properties listed are Typical Value or Minimum Average Roll Value (MARV) as defined in ASTM D4439.

<sup>2</sup> PP = Polypropylene; NPNW = Needle-Punched Nonwoven; HIPS = High Impact Polystyrene

<sup>3</sup> Values for AOS represent Maximum Average Roll Value (MaxARV).

<sup>4</sup> In-plane flow rate measured at 3,600 psf (172 kPa) compressive load and a hydraulic gradient of 1.0.

All technical information contained in this document is accurate as of publication. AWD reserves the right to make changes to products and literature without notice. Please refer to our website for the most current technical information available.



# SITEDRAIN™ PREFABRICATED STRIP DRAINS



SITEDRAIN Strip Series prefabricated drains are constructed by fully wrapping a perforated, high strength, high flow capacity polymeric core with a geotextile filter fabric. The filter fabric is securely bonded to prevent soil intrusion into the flow channels while allowing water to freely enter the drain core from all sides.

SITEDRAIN Strip Series products have more than 70% open area for water collection and provide a cost-effective, sustainable, performance driven alternative to perforated pipe & stone systems. SITEDRAIN Strip Series prefabricated drains are manufactured to meet various compressive strengths and flow capacities and are available with filter fabrics meeting AASHTO M 288-06 specifications.

PROPERTY <sup>1</sup>	TEST METHOD	UNIT OF MEASURE	6400	6400-T	6600	6800	9400	9400-T	9600	9800
<b>GEOTEXTILE</b>										
Material <sup>2</sup>			PP, NPNW	PP, SBNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, SBNW	PP, NPNW	PP, NPNW
Survivability	AASHTO M288	-	3	3	2	1	3	3	2	1
Grab Tensile Strength	ASTM D4632	lbs	135	150	195	245	135	150	195	245
		N	601	667	867	1,090	601	667	867	1,090
Grab Elongation	ASTM D4632	%	60	50	60	60	60	50	60	60
CBR Puncture Strength	ASTM D6241	lbs	365	295	505	580	365	295	505	580
		kN	1,624	1,312	2,246	2,580	1,624	1,312	2,246	2,580
UV Resistance	ASTM D4355	% / 500 Hrs	70	70	70	70	70	70	70	70
Apparent Opening Size <sup>3</sup>	ASTM D4751	sieve	70	80	70	80	70	80	70	80
		mm	0.212	0.180	0.212	0.180	0.212	0.180	0.212	0.180
Permittivity	ASTM D4491	sec <sup>-1</sup>	2.4	1.0	2.1	1.8	2.4	1.0	2.1	1.8
Water Flow Rate	ASTM D4491	gpm/ft <sup>2</sup>	175	70	155	135	175	70	155	135
		Lpm/m <sup>2</sup>	7,130	2,850	6,315	5,501	7,130	2,850	6,315	5,501
<b>CORE</b>										
Material <sup>2</sup>			HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS	HIPS
Compressive Strength	ASTM D6364	psf	6,000	6,000	6,000	6,000	9,500	9,500	9,500	9,500
	ASTM D1621	kPa	287	287	287	287	455	455	455	455
Thickness	ASTM D1777	in	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
		mm	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4
In-Plane Flow Rate <sup>4</sup>	ASTM D4716	gpm/ft	21	21	21	21	21	21	21	21
		Lpm/m	261	261	261	261	261	261	261	261

## ROLL DIMENSIONS:

WIDTH	ROLL LENGTH
6"	150'
12"	150' or 500'
18"	150' or 500'
24"	150' or 500'
36"	100'

## FITTINGS:

AWD has a full line of fittings that transition collected water from strip drains to standard 4" pipe.

<sup>1</sup> Unless otherwise noted, all physical and performance properties listed are Typical Value or Minimum Average Roll Value (MARV) as defined in ASTM D4439.

<sup>2</sup> PP = Polypropylene; NPNW = Needle-Punched Nonwoven; SBNW = Spunbonded Nonwoven; HIPS = High Impact Polystyrene

<sup>3</sup> Values for AOS represent Maximum Average Roll Value (MaxARV).

<sup>4</sup> In-plane flow rate measured at 3,600 psf (172 kPa) compressive load and a hydraulic gradient of 0.1.

All technical information contained in this document is accurate as of publication. AWD reserves the right to make changes to products and literature without notice. Please refer to our website for the most current technical information available.

# SITEDRAIN™ PREFABRICATED HQ DRAINS



SITEDRAIN HQ Series geocomposite combination drain products are composed of a dimpled polymeric core with a geotextile bonded to the dimple side. The geotextile allows water to pass through while retaining backfill materials. The solid core allows water collection from one side and provides a continuous flow path to designated drainage exits. The 24"-wide product combines 12" of high-profile 1"-thick core with 12" of low-profile 7/16"-thick core and includes an integrated transition flange for easy connection to SITEDRAIN geocomposite sheet drain products.

SITEDRAIN HQ Series products provide a value engineered alternative to perforated pipe and aggregate subsurface drainage systems in applications requiring high strength and high flow capacity. Various geotextile options are available to meet project-specific requirements.

PROPERTY <sup>1</sup>	TEST METHOD	UNIT OF MEASURE	244	246	248
<b>GEOTEXTILE</b>					
Material <sup>2</sup>			PP, NPNW	PP, NPNW	PP, NPNW
Survivability	AASHTO M288	-	3	2	1
Grab Tensile Strength	ASTM D4632	lbs	135	195	245
		N	601	867	1,090
Grab Elongation	ASTM D4632	%	60	60	60
CBR Puncture Strength	ASTM D6241	lbs	365	505	580
		kN	1,624	2,246	2,580
UV Resistance	ASTM D4355	% / 500 Hrs	70	70	70
Apparent Opening Size <sup>3</sup>	ASTM D4751	sieve	70	70	80
		mm	0.212	0.212	0.180
Permittivity	ASTM D4491	sec <sup>-1</sup>	2.4	2.1	1.8
Water Flow Rate	ASTM D4491	gpm/ft <sup>2</sup>	175	155	135
		Lpm/m <sup>2</sup>	7,130	6,315	5,501
<b>CORE</b>					
Material <sup>2</sup>			HIPS	HIPS	HIPS
Compressive Strength	ASTM D6364 ASTM D1621	psf	9,000	9,000	9,000
		kPa	431	431	431
Thickness	ASTM D1777	in	0.4 / 1.0	0.4 / 1.0	0.4 / 1.0
		mm	10 / 25.4	10 / 25.4	10 / 25.4
In-Plane Flow Rate <sup>4</sup>	ASTM D4716	gpm/ft	21	21	21
		Lpm/m	261	261	261

<sup>1</sup> Unless otherwise noted, all physical and performance properties listed are Typical Value or Minimum Average Roll Value (MARV) as defined in ASTM D4439.

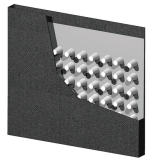
<sup>2</sup> PP = Polypropylene; NPNW = Needle-Punched Nonwoven; HIPS = High Impact Polystyrene

<sup>3</sup> Values for AOS represent Maximum Average Roll Value (MaxARV).

<sup>4</sup> In-plane flow rate measured at 3,600 psf (172 kPa) compressive load and a hydraulic gradient of 0.1.

All technical information contained in this document is accurate as of publication. AWD reserves the right to make changes to products and literature without notice. Please refer to our website for the most current technical information available.

# SITEDRAIN™ PREFABRICATED HQS DRAINS



SITEDRAIN HQS Series geocomposite strip drain products are composed of a dimpled polymeric perforated core fully wrapped in geotextile with an integrated transition flange for connection to SITEDRAIN geocomposite sheet drain products. The geotextile allows water to pass through while retaining backfill materials. The perforated core allows water collection from all sides and provides a continuous flow path to designated drainage exits.

SITEDRAIN HQS Series products provide a value engineered alternative to perforated pipe and aggregate subsurface drainage systems in applications requiring high strength and high flow capacity. Various geotextile options and product widths are available to meet project-specific requirements.

PROPERTY <sup>1</sup>	TEST METHOD	UNIT OF MEASURE	1240	1260	1280	1840	1860	1880
<b>GEOTEXTILE</b>								
Material <sup>2</sup>			PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW	PP, NPNW
Survivability	AASHTO M288	-	3	2	1	3	2	1
Grab Tensile Strength	ASTM D4632	lbs	135	195	245	135	195	245
		N	601	867	1,090	601	867	1,090
Grab Elongation	ASTM D4632	%	60	60	60	60	60	60
CBR Puncture Strength	ASTM D6241	lbs	365	505	580	365	505	580
		kN	1,624	2,246	2,580	1,624	2,246	2,580
UV Resistance	ASTM D4355	% / 500 Hrs	70	70	70	70	70	70
Apparent Opening Size <sup>3</sup>	ASTM D4751	sieve	70	70	80	70	70	80
		mm	0.212	0.212	0.180	0.212	0.212	0.180
Permittivity	ASTM D4491	sec <sup>-1</sup>	2.4	2.1	1.8	2.4	2.1	1.8
Water Flow Rate	ASTM D4491	gpm/ft <sup>2</sup>	175	155	135	175	155	135
		Lpm/m <sup>2</sup>	7,130	6,315	5,501	7,130	6,315	5,501
<b>CORE</b>								
Material <sup>2</sup>			HIPS	HIPS	HIPS	HIPS	HIPS	HIPS
Compressive Strength	ASTM D6364	psf	9,500	9,500	9,500	9,500	9,500	9,500
	ASTM D1621	kPa	455	455	455	455	455	455
Thickness	ASTM D1777	in	1.0	1.0	1.0	1.0	1.0	1.0
		mm	25.4	25.4	25.4	25.4	25.4	25.4
In-Plane Flow Rate <sup>4</sup>	ASTM D4716	gpm/ft	21	21	21	21	21	21
		Lpm/m	261	261	261	261	261	261

<sup>1</sup> Unless otherwise noted, all physical and performance properties listed are Typical Value or Minimum Average Roll Value (MARV) as defined in ASTM D4439.

<sup>2</sup> PP = Polypropylene; NPNW = Needle-Punched Nonwoven; HIPS = High Impact Polystyrene

<sup>3</sup> Values for AOS represent Maximum Average Roll Value (MaxARV).

<sup>4</sup> In-plane flow rate measured at 3,600 psf (172 kPa) compressive load and a hydraulic gradient of 0.1.

All technical information contained in this document is accurate as of publication. AWD reserves the right to make changes to products and literature without notice. Please refer to our website for the most current technical information available.

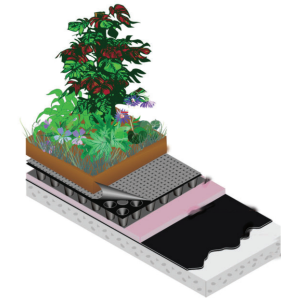


# SITEDRAIN™ VRA SERIES

## PREFABRICATED GREEN ROOF DRAINS

SITEDRAIN VRA Series geocomposites are designed for vegetative roof assembly (VRA) applications, which are also commonly referred to as “green roof”, “roof garden”, and “eco-roof” applications. SITEDRAIN VRA products provide the “middle layer” of a complete VRA system, providing lightweight and economical solutions for drainage, aeration, water storage, soil retention, root barrier, and waterproofing membrane protection. SITEDRAIN VRA Series products are composed of a high-strength dimpled polymeric perforated core with a geotextile bonded to both sides. The spunbonded nonwoven geotextile on the top side allows water to pass through while retaining planting media and serving as a physical root barrier to inhibit root penetration by vegetation with low to moderately aggressive root structures. The core provides water storage capacity, as well as a continuous flow path for excess water to designated drainage exits. The needlepunched nonwoven geotextile on the bottom side provides protection to layers below, such as waterproofing membranes and insulation.

PROPERTY <sup>1</sup>	TEST METHOD	UNIT OF MEASURE	VRA 50	VRA 100
<b>GEOTEXTILE - TOP SIDE</b>				
Material <sup>2</sup>			PP, SBNW	PP, SBNW
Survivability	AASHTO M288	Class	3	3
Grab Tensile Strength	ASTM D4632	lbs	150	150
		N	667	667
Grab Elongation	ASTM D4632	%	50	50
CBR Puncture	ASTM D6241	lbs	295	295
		N	1,312	1,312
UV Resistance	ASTM D4355	% / 500 Hrs	70	70
Apparent Opening Size (AOS) <sup>3</sup>	ASTM D4751	sieve	80	80
		mm	0.180	0.180
Permittivity	ASTM D4491	sec <sup>-1</sup>	1.0	1.0
Water Flow Rate	ASTM D4491	gpm / ft <sup>2</sup>	70	70
		Lpm / m <sup>2</sup>	2,850	2,850
<b>CORE</b>				
Material <sup>2</sup>			HIPS	HIPS
Compressive Strength	ASTM D6364 ASTM D1621	psf	15,000	9,500
		kPa	718	455
Thickness	ASTM D5199	in	0.4	1
		mm	10	25.4
In-Plane Flow Rate <sup>4</sup> Hydraulic Gradient = 1.0	ASTM D4716	gpm/ft	18	80
		Lpm/m	224	933
In-Plane Flow Rate <sup>4</sup> Hydraulic Gradient = 0.1	ASTM D4716	gpm/ft	6	21
		Lpm/m	75	260
Water Storage Capacity	ASTM E2398	gal/ft <sup>2</sup>	0.05	0.08
		L/m <sup>2</sup>	2.0	3.3
Perforation Open Area	CALCULATED	in <sup>2</sup> /ft <sup>2</sup>	3.9	8.7
		mm <sup>2</sup> /m <sup>2</sup>	27080	60,400
<b>GEOTEXTILE - BOTTOM SIDE</b>				
Material <sup>2</sup>			PP, NPNW	PP, NPNW
Grab Tensile Strength	ASTM D4632	lbs	100	100
		N	445	445



<sup>1</sup> Unless otherwise noted, all physical and performance properties listed are Typical Value as defined in ASTM D4439.

<sup>2</sup> PP = Polypropylene; HIPS = High Impact Polystyrene; NPNW = Needle-Punched Nonwoven; SBNW = Spunbonded Nonwoven

<sup>3</sup> Values for AOS represent Maximum Average Roll Value (MaxARV).

<sup>4</sup> In-plane flow rate measured at 3,600 psf (172 kPa) compressive load and a hydraulic gradient of 1.0.

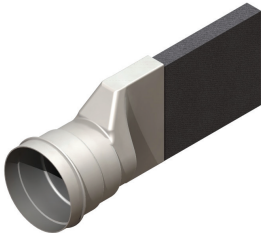
All technical information contained in this document is accurate as of publication. AWD reserves the right to make changes to products and literature without notice.

Please refer to our website for the most current technical information available.



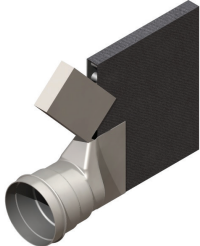
# FITTINGS & ACCESSORIES

**PIPE OUTLETS: Transition water to 4" smooth or corrugated pipe**



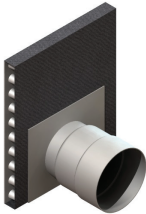
**6" End Outlet**  
10/box

Item: #20005



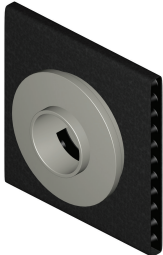
**End Outlet**  
10/box

- 12" Strip Drain    Item: #20006
- 18" Strip Drain    Item: #20007
- 24" Strip Drain    Item: #20008
- 36" Strip Drain    Item: #20009
- Combination Drain: Item: #20008



**Tee Outlet**  
10/box

- 6" Strip Drain    Item: #20024
- 12" Strip Drain    Item: #20015
- 18" Strip Drain    Item: #20016
- 24" Strip Drain    Item: #20017
- 36" Strip Drain    Item: #20018
- Combination Drain: Item: #20019

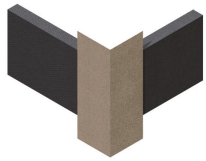


**Geo-Outlet**  
10/box

Item: #20026

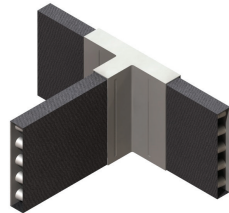
# FITTINGS & ACCESSORIES

## CONNECTORS:



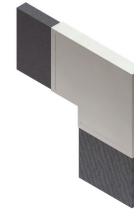
**12" Corner Guard**  
20/box

Item: #20022



**6" Tee Connector**  
10/box

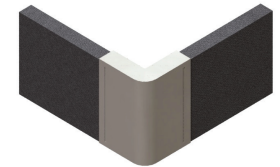
Item: #20014



**Step-Down Fittings**  
10/box

6" Strip Drain  
12" Strip Drain

Item: #20012  
Item: #20013



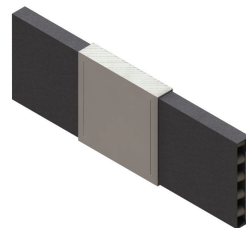
**6" Corner Fitting**  
10/box

Item: #20002



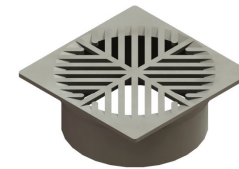
**Fitting & Joint Tape**  
Minimum 1 Roll

Item: #29000



**6" Splice Connector**  
10/box

Item: #20011



**Drain Grates**  
Minimum 1 Unit

3" Pipe Item: #29001  
4" Pipe Item: #29002



CIVIL & SITE  
SOLUTIONS



TRANSPORTATION  
SOLUTIONS



LANDSCAPE  
SOLUTIONS



SOIL CONSOLIDATION  
SOLUTIONS



ATHLETIC FIELD  
SOLUTIONS



RESIDENTIAL  
SOLUTIONS



BUILDING  
SOLUTIONS



SUSTAINABLE  
SOLUTIONS