# $SITEDRAIN^{\text{TM}}_{\text{prefabricated drains}}$





 $\begin{array}{c} \text{Core Compressive} \\ \text{Strength} \end{array} \xleftarrow{183} \longrightarrow \begin{array}{c} \text{Geotextile} \\ \text{Weight} \end{array}$ 

**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.

#### $SITEDRAIN^{\text{TM}}_{\text{ prefabricated sheet drains}}$



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
GEOTEXTILE																				
Material <sup>2</sup>			PP, NPNW	PP, SBNW	PP, NPNW	PP, WM	PP, NPNW													
Survivability	AASHTO M288	-	-	3	2	1	-	3	2	1	-	3	3	2	-	1	-	3	2	1
Grab Tensile	ASTM D4632	lbs	100	135	195	245	100	135	195	245	100	135	150	195	430 x 240	245	100	135	195	245
Strength	A3111 D403Z	N	445	601	867	1,090	445	601	867	1,090	445	601	670	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	ASTM D6241	lbs	305	365	505	580	305	365	505	580	305	365	315	505	800	580	305	365	505	580
Strength	AST11 D0241	kN	1,356	1,624	2,246	2,580	1,356	1,624	2,246	2,580	1,356	1,624	1,380	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	ASTM D4751	sieve	70	70	70	80	70	70	70	80	70	70	70	70	50	80	70	70	70	80
Size <sup>3</sup>	A3111 D4731	mm	0.212	0.212	0.212	0.180	0.212	0.212	0.212	0.180	0.212	0.212	0.210	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
	A3111 D4431	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
CORE																				
Material <sup>2</sup>			HIPS	HIPS	HIPS	HIPS	HIPS	HIPS												
Compressive	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
Strength	ASTM D1621	kPa	431	431	431	431	527	527	527	527	862	862	862	862	862	862	862	862	862	862
TI - 1	40TH 01777	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
Thickness	ASTM D1777	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		gpm/ft	12	12	12	12	18	18	18	18	21	21	21	21	21	21	13	13	13	13
Rate <sup>4</sup>	ASTM D4716	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.



#### $SITEDRAIN^{\text{TM}}_{\text{ prefabricated ds-sheet drains}}$



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
GEOTEXTILE																	
Material <sup>2</sup>			PP, NPNW														
Survivability	AASHTO M288	-	-	3	2	1	-	3	2	1	-	3	2	1	-	3	2
Grab Tensile Strenath ASTM D4632	lbs	100	135	195	245	100	135	195	245	100	135	195	245	100	135	195	
Grab Tensile Strength	ASTM 04632	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
	ACTM D00/1	lbs	305	365	505	580	305	365	505	580	305	365	505	580	305	365	505
CBR Puncture Strength	ASTM D6241	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
	AOTM D/7E1	sieve	70	70	70	80	70	70	70	80	70	70	70	80	70	70	70
Apparent Opening Size <sup>3</sup>	ASTM D4751	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
water riuw kate	A3111 D4491	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
CORE																	
Material <sup>2</sup>			HIPS														
	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
Compressive Strength	ASTM D1621	kPa	431	431	431	431	527	527	527	527	862	862	862	862	862	862	862
		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
Thickness	ASTM D1777	mm	6.35	6.35	6.35	6.35	10	10	10	10	10	10	10	10	6.35	6.35	6.35
		gpm/ft	12	12	12	12	18	18	18	18	21	21	21	21	13	13	13
In-Plane Flow Rate <sup>4</sup>	ASTM D4716	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.



#### $SITEDRAIN^{\text{TM}}_{\text{ prefabricated chimney drains}}$



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 feasable. 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
GEOTEXTILE					·									,
Material <sup>2</sup>			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
AUTI D4002	A3111 D4032	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
CPP Dupoturo Strongth	Puncture Strength ASTM D6241	lbs	365	505	580	365	505	580	365	505	580	365	505	580
CBR Puncture Strength		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
	ASTM D4751	sieve	70	70	80	70	70	80	70	70	80	70	70	80
Apparent Opening Size <sup>3</sup>	A3111 D4751	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/ft²	175	155	135	175	155	135	175	155	135	175	155	135
water now nate	A3111 D4431	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
CORE														
Material <sup>2</sup>			HIPS											
0	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
Compressive Strength	ASTM D1621	kPa	431	431	431	527	527	527	862	862	862	862	862	862
Thistory	AOTM 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
Thickness	ASTM D1777	mm	6.35	6.35	6.35	10	10	10	10	10	10	6.35	6.35	6.35
	40TM D/710	gpm/ft	12	12	12	18	18	18	21	21	21	13	13	13
In-Plane Flow Rate <sup>4</sup>	ASTM D4716	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.



#### $SITEDRAIN^{\text{TM}}_{\text{ prefabricated strip drains}}$



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 capacitied 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
GEOTEXTILE										
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	135	195	245	135	135	195	245
Grab Tensile Strength	A3111 D4032	Ν	601	601	867	1,090	601	601	867	1,090
Grab Elongation	ASTM D4632	%	60	60	60	60	60	60	60	60
CDD Dupoturo Strongth	ASTM D6241	lbs	365	365	505	580	365	365	505	580
CBR Puncture Strength	ASTM D6241	kN	1,624	1,624	2,246	2,580	1,624	1,624	2,246	2,580
UV Resistance	ASTM D4355	% / 500 Hrs	70	70	70	70	70	70	70	70
	ASTM D4751	sieve	70	70	70	80	70	70	70	80
Apparent Opening Size <sup>3</sup>	A3111 D4/51	mm	0.212	0.212	0.212	0.180	0.212	0.212	0.212	0.180
Permittivity	ASTM D4491	sec <sup>-1</sup>	2.4	2.4	2.1	1.8	2.4	2.4	2.1	1.8
Water Flow Rate	ASTM D4491	gpm/ft²	175	175	155	135	175	175	155	135
water FIUW Rate	ASTR D4491	Lpm/m <sup>2</sup>	7,130	7,130	6,315	5,501	7,130	7,130	6,315	5,501
CORE										
Material <sup>2</sup>			HIPS							
0	ASTM D6364	psf	6,000	6,000	6,000	6,000	9,500	9,500	9,500	9,500
Compressive Strength	ASTM D1621	kPa	287	287	287	287	455	455	455	455
TL 1.1	AOTM D1777	in	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Thickness	ASTM D1777	mm	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4
	10TH D/710	gpm/ft	21	21	21	21	21	21	21	21
In-Plane Flow Rate <sup>4</sup>	ASTM D4716	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.



#### $SITEDRAIN^{\text{TM}}_{\text{ prefabricated ho drains}}$

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
GEOTEXTILE					
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
	ASTM D4652	N	601	867	1,090
Grab Elongation	ASTM D4632	%	60	60	60
CBR Puncture Strength		lbs	365	505	580
	ASTM D6241	kN	1,624	2,246	2,580
UV Resistance	ASTM D4355	% / 500 Hrs	70	70	70
	ASTM D4751	sieve	70	70	80
Apparent Opening Size <sup>3</sup>	ASIM 04/51	mm	0.212	0.212	0.180
Permittivity	ASTM D4491	sec-1	2.4	2.1	1.8
Wataa Elaw Data		gpm/ft <sup>2</sup>	175	155	135
Water Flow Rate	ASTM D4491	Lpm/m <sup>2</sup>	7,130	6,315	5,501
CORE					
Material <sup>2</sup>			HIPS	HIPS	HIPS
0	ASTM D6364	psf	9,000	9,000	9,000
Compressive Strength	ASTM D1621	kPa	431	431	431
T1.1.1		in	0.4 / 1.0	0.4 / 1.0	0.4 / 1.0
Thickness	ASTM D1777	mm	10 / 25.4	10 / 25.4	10 / 25.4
la Diana Flau Data (	ACTM D/ 710	gpm/ft	21	21	21
In-Plane Flow Rate <sup>4</sup>	ASTM D4716	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.



### $SITEDRAIN^{\text{TM}}_{\text{ prefabricated hos drains}}$



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
GEOTEXTILE								
Material <sup>2</sup>			PP, NPNW					
Survivability	AASHTO M288	-	3	2	1	3	2	1
Crob Tanaila Strangth	ASTM D4632	lbs	135	195	245	135	195	245
Grab Tensile Strength	ASTN 04032	N	601	867	1,090	601	867	1,090
Grab Elongation	ASTM D4632	%	60	60	60	60	60	60
CBR Puncture Strength		lbs	365	505	580	365	505	580
	ASTM D6241	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
· · · · · · · · · · · · · · · · · · ·	ASTM D4751	sieve	70	70	80	70	70	80
Apparent Opening Size <sup>3</sup>	A3111 D4731	mm	0.212	0.212	0.180	0.212	0.212	0.180
Permittivity	ASTM D4491	Sec-1	2.4	2.1	1.8	2.4	2.1	1.8
Water Flow Rate		gpm/ft²	175	155	135	175	155	135
	ASTM D4491	Lpm/m <sup>2</sup>	7,130	6,315	5,501	7,130	6,315	5,501
CORE								
Material <sup>2</sup>			HIPS	HIPS	HIPS	HIPS	HIPS	HIPS
0	ASTM D6364	psf	9,500	9,500	9,500	9,500	9,500	9,500
Compressive Strength	ASTM D1621	kPa	455	455	455	455	455	455
TL 1. L	AOTM D1777	in	1.0	1.0	1.0	1.0	1.0	1.0
Thickness	ASTM D1777	mm	25.4	25.4	25.4	25.4	25.4	25.4
		gpm/ft	21	21	21	21	21	21
In-Plane Flow Rate <sup>4</sup>	ASTM D4716	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.



### $\mathsf{SITEDRAIN}^{^{\mathsf{TM}}}\mathsf{VRA}\;\mathsf{SERIES}\;\mathsf{prefabricated\;green\;roof\;drains}$

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 1	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
Ouch Tanaila Obranath		lbs	150	150
Grab Tensile Strength	ASTM D4632	N	670	670
Grab Elongation	ASTM D4632	%	50	50
CBR Puncture		lbs	315	315
CBR PUNCLUIE	ASTM D6241	N	1,380	1,380
UV Resistance	ASTM D4355	% / 500 Hrs	70	70
Apparent Opening Size (AOS)3	ACTM D/7E1	sieve	70	70
Apparent Opening Size (AOS) <sup>3</sup>	ASTM D4751	mm	0.210	0.210
Permittivity	ASTM D4491	Sec <sup>-1</sup>	1.0	1.0
Water Flow Rate	ASTM D4491	gpm / ft²	70	70
water flow kate	ASTH D4491	Lpm / m <sup>2</sup>	2,850	2,850
CORE				
Material <sup>2</sup>			HIPS	HIPS
Compressive Strength	ASTM D6364	psf	15,000	9,500
compressive strength	ASTM D1621	kPa	718	455
Thickness	ASTM D5199	in	0.4	1
THICKNESS	A2111 D2199	mm	10	25.4
In-Plane Flow Rate <sup>4</sup>	ASTM D4716	gpm/ft	18	80
Hydraulic Gradient = 1.0	ASTI1 D4/10	Lpm/m	224	933
In-Plane Flow Rate <sup>4</sup>	ASTM D4716	gpm/ft	6	21
Hydraulic Gradient = 0.1	ASTI1 D4/10	Lpm/m	75	260
Water Storage Capacity	ASTM E2398	gal/ft <sup>2</sup>	0.05	0.08
water storage capacity	ASTREZJO	L/m <sup>2</sup>	2.0	3.3
Perforation Open Area	CALCULATED	in²/ft²	3.9	8.7
гентогаций орен Агеа	GALGULATED	mm²/m²	27,080	60,400
GEOTEXTILE - BOTTOM SIDE				
Material <sup>2</sup>			PP, NPNW	PP, NPNW
Grab Tensile Strength	ASTM D4632	lbs	100	100
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<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

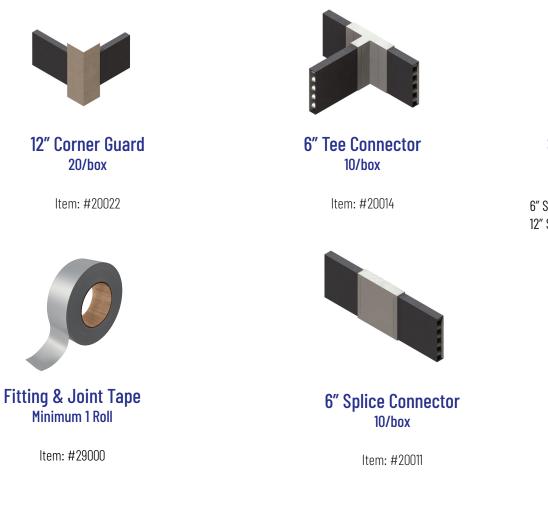
Item: #20026



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## FITTINGS & ACCESSORIES

#### **CONNECTORS:**





Step-Down Fittings 10/box

Item: #20012

Item: #20013

6″ Strip Drain 12″ Strip Drain 6" Corner Fitting 10/box

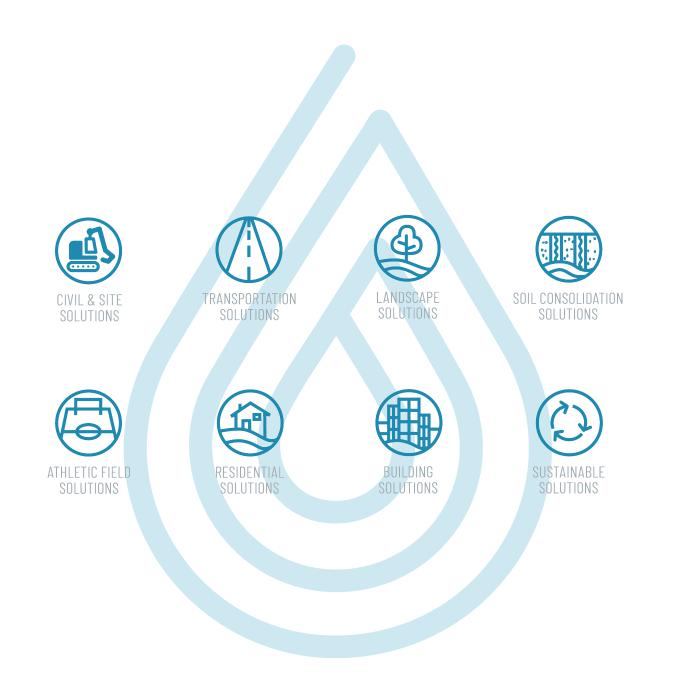
Item: #20002

Drain Grates Minimum 1 Unit

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









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