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SHOREBLOCK®

SD SERIES

Concrete Revetment Block

PROTECTING OUR NATURAL RESOURCES

Specifications



SHOREBLOCK® SD is a flexible, interlocking matrix of concrete blocks of uniform size, shape and weight connected by a series of cables which pass longitudinally through preformed ducts in each block. SHOREBLOCK® SD revetment systems combine the favorable aspects of lightweight blankets and meshes, such as porosity, flexibility, vegetation encouragement and habitat enhancement with non-erodible, self-weight and high tractive force resistance of a rigid lining.

SHOREBLOCK® SD has proven to be an aesthetic and functional alternative to rip-rap, poured in place concrete and other heavy-duty, erosion protection systems. SHOREBLOCK® SD is easy to install, therefore, can dramatically reduce overall project costs. More specifically, when compared to other systems, life-cycle costs have been reduced because SHOREBLOCK® SD is a permanent system and saves on subsequent maintenance expenses.

SHOREBLOCK® SD blocks of different heights and weights can be assembled to provide a castellated cover layer for a higher coefficient of hydraulic friction or improved wave energy absorption and retention.

Research and Design

SHOREBLOCK® SD is the most durable, effective and environmentally-friendly erosion control revetment method of fighting severe erosion problems. SHOREBLOCK® SD mats are available

in eight foot widths in lengths up to 40 feet. Mats can be joined to achieve greater lengths. Different sizes of SHOREBLOCK® SD are available depending on the severity of the application. In most markets, Articulated Concrete Blocks (ACBs) are competitive in cost to 12" diameter (or greater) rock (or rip-rap) placed in an 18" or greater blanket thickness, are competitive with gabion mattresses and ACBs are typically more economical than poured in place concrete.

ACBs were successfully tested by the U.S. Bureau of Reclamation and U.S. Federal Highway Administration (FHWA-RD-89-199). The Corps of Engineers has used ACBs on numerous designs for both channel and shoreline stability. Comprehensive wave tank testing was evaluated in 1983 at Oregon State University. ACB installations have been performing successfully since 1980.

SHOREBLOCK® SD DESIGN ADVANTAGES

- Each block has an open area of up to 20% to allow for superior hydrostatic pressure relief and ecologically pleasing vegetative cover.
- Interlocking cabling allow greater flexibility through the axes of articulation — conforms better to ground contours and settlement.
- Prefabricated mats offer quick installation, even underwater.
- Tests have shown that the force needed to remove a block from a revegetated cover layer may be equal to 20 times the weight of the block.



SHOREBLOCK® SD has been successfully tested by Colorado State University, in accordance with the hydraulic performance testing protocol established by the U.S. Federal Highway Administration. (FHWA-RD-89-199).



MIN. DENSITY (IN AIR) (Lbs./Ft. ³)		MIN. COMPRESSIVE STRENGTH (PSI)		MAX. WATER ABSORPTION (Lbs./Ft. ³)	
AVE. OF 3 UNITS	INDIVIDUAL UNIT	AVE. OF 3 UNITS	INDIVIDUAL UNIT	AVE. OF 3 UNITS	INDIVIDUAL UNIT
130	125	4,000	3,500	9.1	11.7

* Unit weight and density values may vary due to availability of local materials.

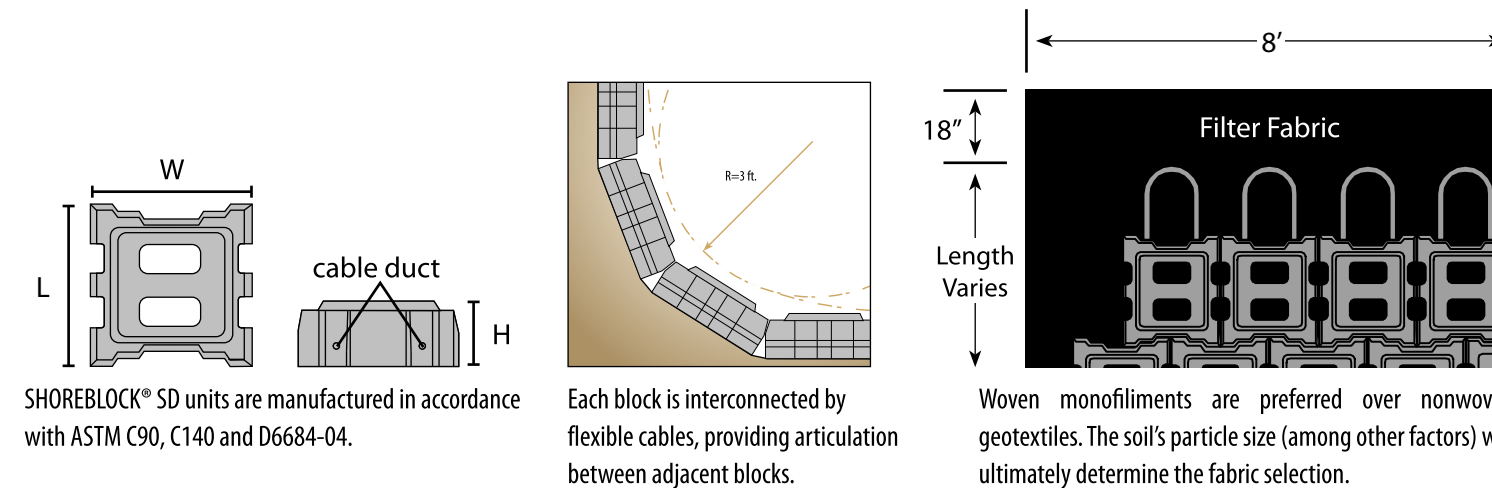


Fabrication of a SHOREBLOCK® SD mat is accomplished by threading corrosive resistant steel or special synthetic cable in one direction through a series of blocks. Cables are then secured to the mattress with corrosive resistant hardware. Cables are sized to provide a 5 to 1 cable strength to mat weight ratio to ensure safe handling while providing extraordinary strength in the system. Longitudinal cables are looped together at the ends of each row of blocks in the mat assembly for easy handling and anchoring. The open cells of SHOREBLOCK® SD comprise about 20% of the mat area.

BLOCK CLASS	OPEN CELL						
	DIMENSIONS IN.			BLOCK		UNIT COVERAGE Sq. Ft.	OPEN AREA
	H	W	L	Unit Weight Lbs.	System Weight Lbs./Sq. Ft.		
SD-400 OC	4.00	15.50	17.40	50-57	28-32	1.78	20%
SD-475 OC	4.75	15.50	17.40	62-71	35-40	1.78	20%
SD-600 OC	6.00	15.50	17.40	81-94	46-53	1.78	20%
SD-800 OC	8.00	15.50	17.40	108-118	61-67	1.78	20%
SD-900 OC	9.00	15.50	17.40	120-138	68-78	1.78	20%

BLOCK CLASS	CLOSED CELL						
	DIMENSIONS IN.			BLOCK		UNIT COVERAGE Sq. Ft.	OPEN AREA
	H	W	L	Unit Weight Lbs.	System Weight Lbs./Sq. Ft.		
SD-400 CC	4.00	15.50	17.40	66-73	37-41	1.78	10%
SD-475 CC	4.75	15.50	17.40	78-89	43-50	1.78	10%
SD-600 CC	6.00	15.50	17.40	94-108	53-61	1.78	10%
SD-800 CC	8.00	15.50	17.40	125-135	71-76	1.78	10%
SD-900 CC	9.00	15.50	17.40	145-167	82-98	1.78	10%

*The SD Series denotes Single Directional Cable System. Note: Additional block styles may be available in some areas. Check with your local SHORETEC® representative for product availability.



Features & Benefits



DURABILITY

SHOREBLOCK® SD will not suffer loss of function due to chemical degradation, UV degradation, biological degradation, vandalism or aging throughout its design life.

STABILITY

SHOREBLOCK® SD has the necessary strength characteristics to resist displacement due to imposed tractive forces and wave loads and the necessary strength to resist both lateral displacement and vertical uplift.

ACCEPTABILITY

SHOREBLOCK® SD becomes part of the landscape and the local ecosystem. Its construction is free of hazardous projections thus offering opportunities for recreation as native grasses are quick to germinate in the soil-filled cells.

AFFORDABILITY

The SHOREBLOCK® SD System is engineered to ensure comprehensive project design, and high quality components at 20-50% lower than alternative erosion control methods.