American Excelsior Company®
Earth Science Division

Curlex® Sediment Log®

Excelsior Sediment Control Device

SUGGESTED SPECIFICATIONS

General

Sediment Log consists of an outside, open weave, containment fabric filled with Great Lakes Aspen curled excelsior fibers. Its purpose is to provide a flexible, lightweight, porous, sediment control device demonstrating the ability to conform to terrain details, dissipate water velocity, and filter contaminated flows.

Product

Sediment Control Device shall be Curlex Sediment Log, as manufactured by American Excelsior Company. Curlex Sediment Logs shall be made of Great Lakes Aspen excelsior fibers encased in an outside, open weave containment fabric secured on each end. Fibers shall be curled with soft, interlocking barbs to form a strong, organic filtration matrix. A minimum of 80 percent of the fibers shall be 15 cm (6 in) or greater in length. Fibers shall be evenly distributed throughout the diameter and length of the Sediment Log. Excelsior fibers shall be seed free. Density of Sediment Logs shall not exceed 2.6 lb/ft^3 to ensure necessary flow rates for filtering of ≥ 35 GPM/ft². Curlex Sediment Log shall be manufactured in the U.S.A. at company locations where QA/QC is implemented and managed by the manufacturer. Field fabricated products and products made by anyone other than the manufacturer (i.e. distributors, dealers, etc.) shall not be accepted.

Product Name/Nominal Diameter[a]	20 in	12 in	9 in	6 in
Length (±10%)	3.05 m (10 ft)	3.05 m (10 ft)	7.62 m (25 ft)	7.62 m (25 ft)
Weight (±10%)[b]	13.62 kg (30 lb)	9.02 kg (20 lb)	11.35 kg (25 lb)	5.45 kg (12 lb)
Net opening (hexagonal-shaped)	3.2 cm (1.3 in)	2.5 cm (1 in)	1.9 cm (.75 in)	1.3 cm (.5 in)

Performance Requirements

Property	Value	Method
Flow Rate (GPM/ft²)	≥ 35	ASTM D5141
Slope Soil Loss Reduction (%)	≥ 70	Quantified research[c]
Channel Soil Loss Reduction (%)	≥ 50	ASTM D7208
pH Buffering	8 ± 3	ASTM D1117, Modified
Functional Longevity[d]	≤ 24 Months	Documented laboratory and field studies
Oil Sorbent	Preapproved	U.S. Environmental Protection Agency
Removal of Polynuclear Aromatic Hydrocarbons (PAHs)	≥ 95%	Quantified research[e]
Fly Ash Filtration (TSS)	≥ 78%	Quantified research[f]
Fly Ash Filtration (NTU)	≥ 76%	Quantified research[f]

Curlex Sediment Logs Design Values With Comparisons To Typical Straw Wattles

	Channel Design			Slope Design	
Product Name/ Nominal Diameter	Density[b] (lb/ft^3)	GPM/ft^2 [g]	GPM/linear ft of installed product	P Factor[h] (event-based)	% Soil Retained
6 in Curlex Sediment Log	2.4	42.5	19.5	0.461	53.9
9 in Straw Wattle	4.5	7.5	5.6	0.676	32.4
9 in Curlex Sediment Log	2.3	42.5	29.0	0.461	53.9
12 in Straw Wattle	3.8	8.0	8.0	0.828	17.2
12 in Curlex Sediment Log	2.5	40.0	36.7	0.297	70.3
20 in Curlex Sediment Log	1.4	37.5	46.9	0.297	70.3

[a]Custom sizes available
[b]Weight and density are based on a dry weight basis at time of manufacture. Baseline moisture content of Great Lakes Aspen Excelsior, AEC Premier Straw and AEC Premier Coconut fibers are 22%, 15% and 20% respectively.
[c] Kelsey, K., T. Johnson and R. Vavra. 2006. "Needed Information: Testing, Analyses, and Performance Values for Slope Interruption and Perimeter Control BMPs." IECA Conference Proceedings. P. 171-181.
[d]Functional Longevity varies from region to region because of differences in climatic conditions.
[e]Boving and Zhang, Chemosphere 54 (2004) 831-839.
[f]Kelsey, K. and M. Murley. (2017, January). *Fly Ash Slurry Filtration Using Curlex® Sediment Log® - Quantifying Total Suspended Solids and Turbidity Reduction.* Unpublished internal document, ErosionLab.
[g]Based on ASTM D5141
[h]Based on large simulated rainfall testing

MADE IN THE U.S.A.

If you would like to receive more information or consult with one of our Customer Care Center Specialists, please call us toll free at (888-352-9582)

PDF download specifications available in the Technical Support Library at www.curlex.com