

STYRENIC FIBERS

Page 1 of 3

STYRENIC FILAMENT PROPERTIES



- High set resistance
- High Springiness
- Excellent color and clarity
- Higher yield than PVC

STYRENIC

Durastran® is the Monahan Filaments trade name for polystyrene and polystyrene-acrylonitrile copolymer (SAN) monofilaments. Durastran® is recommended for light duty applications such as floor and counter sweeps and flaggable upright broom, where its resistance to taking a set and its excellent flicking action (springiness) are an asset.

Another advantage of Durastran® is that it yields 20% to 25% more brushes per pound than PVC. These materials have excellent color and clarity, but have limited flex fatigue resistance compared to other Monahan Filaments fibers. In heavier applications, such as scrub brushes or industrial applications, their bend recovery, flex fatigue, and abrasion resistance may be limiting factors.

They have excellent solvent resistance to water based solutions and alcohol, but SAN is resistant to common organic solvents, except strong solvents such as chlorinated hydrocarbons. Monahan Filaments Prostran®, Wytex® and Plyer® may be better choices when exposure to solvents, high temperatures or heavy use is anticipated. Typical ovalities range from 1.04 to 1.20 with larger diameters having greater ovality.

DURASTRAN® R is our 100% polystyrene fiber. This material is a very popular household brush fiber, available in a wide range of sizes and colors. Durastran® is the springiest and has the best sweeping and dusting action of all our brush fibers.

DURASTRAN® SR is our 100% SAN fiber for applications where greater chemical resistance to common solvents such as gasoline, kerosene, oils, etc. is required. This material is very similar to Durastran® R, and is also available in a wide range of sizes and colors.

DURASTRAN® FTA & FTD are our highest quality, most popular flaggable styrenes. With 35% greater yield than PVC and availability in a wide range of colors, this is truly an economical product. FTD is a polystyrene based product and FTA is SAN based. Both are available in flagged bundles.

STYRENIC FIBERS

STYRENIC PRODUCTION CAPABILITIES

PRODUCT	SHAPE	OVALITY	DIAMETER RANGE	BUNDLE WRAP	BUNDLE DIAMETER	CUT LENGTH	HANK LENGTH
DURASTRAN® R	●	1.04 to 1.20	0.008" to 0.060"	PVC	2 ¹ / ₄ " to 2 ³ / ₄ "	1" and up	46" to 52"
DURASTRAN® SR	●	1.03 to 1.15	0.008" to 0.060"	PVC	2 ¹ / ₄ " to 2 ³ / ₄ "	1" and up	46" to 52"
DURASTRAN® FTA ¹	●	1.04 to 1.15	0.008" to 0.060"	PVC	2 ¹ / ₄ " to 2 ³ / ₄ " ¹²	1" and up ³	46" to 52"
DURASTRAN® FTD ¹	●	1.04 to 1.15	0.008" to 0.060"	PVC	2 ¹ / ₄ " to 2 ³ / ₄ " ¹²	1" and up ³	46" to 52"

Tolerances

Diameter Tolerance: Average diameter will be within $\pm 7\%$ of the specified diameter

Cut Length Tolerance: $+1/16$ or $\pm 1/32$ " of the specified length

Notes for Flagged Products

¹These are available in preflagged bundles

²Maximum bundle diameter for flagged bundles is 2¹/₂"

³Maximum and minimum cut lengths for flagged bundles are 12" and 4¹/₂"

Maximum depth for flagging is 7/16"

STYRENIC FIBERS

STYRENIC STANDARD CRIMP & AMPLITUDES

DURASTRAN® FTA & FTD

DIAMETER (INCHES)	2.25 CRIMPS PER INCH AMPLITUDE (INCHES)		3 CRIMPS PER INCH AMPLITUDE (INCHES)		5 CRIMPS PER INCH AMPLITUDE (INCHES)		6.5 CRIMPS PER INCH AMPLITUDE (INCHES)	
	HEAD1	HEAD2	HEAD1	HEAD2	HEAD1	HEAD2	HEAD1	HEAD2
0.006		*	*	*	*	*	*	*
0.008	*	*	0.022	0.016	0.018	0.016	0.016	0.012
0.010	*	0.019	0.024	0.018	0.022	0.018	0.020	0.016
0.012	0.026	0.021	0.026	0.020	0.028	0.020	0.024	0.018
0.014	0.028	0.023	0.032	0.024	0.032	0.022	0.026	0.020
0.016	0.030	0.025	0.036	0.028	0.038	0.024	0.028	0.022
0.018	0.032	0.027	0.038	0.032	0.032	0.026	0.030	0.026
0.020	0.034	0.029	0.040	0.034	0.034	0.028	0.032	0.028
0.022	0.036	0.031	0.042	0.038	0.038	0.030	0.034	0.030
0.024	0.038	0.033	0.044	0.040	0.040	0.032	0.036	0.032
0.026	0.040	0.035	0.046	0.044	0.042	0.034	*	0.032
0.028	0.042	0.037	0.048	0.046	0.044	0.036	*	0.034
0.030	0.044	0.039	0.050	0.048	0.046	0.038	*	*
0.032	0.046	0.041	0.052	0.050	0.048	0.040	*	*
0.034	0.048	0.043	0.054	0.052	0.050	0.042	*	*
0.036	0.050	0.045	0.056	0.054	0.052	0.044	*	*
0.038	0.052	0.047	0.058	0.056	0.054	0.046	*	*
0.040	0.054	0.050	0.060	0.058	0.056	0.048	*	*

NOTES:

Amplitude Tolerance: Average amplitude will be within $\pm 15\%$ or $\pm 0.005"$, whichever is less

Frequency Tolerance: ± 1 crimp per inch

*These amplitudes may be available upon request. Contact your Monahan Filaments Sales Representative.