

# filtec precise inc.

engineered yarns



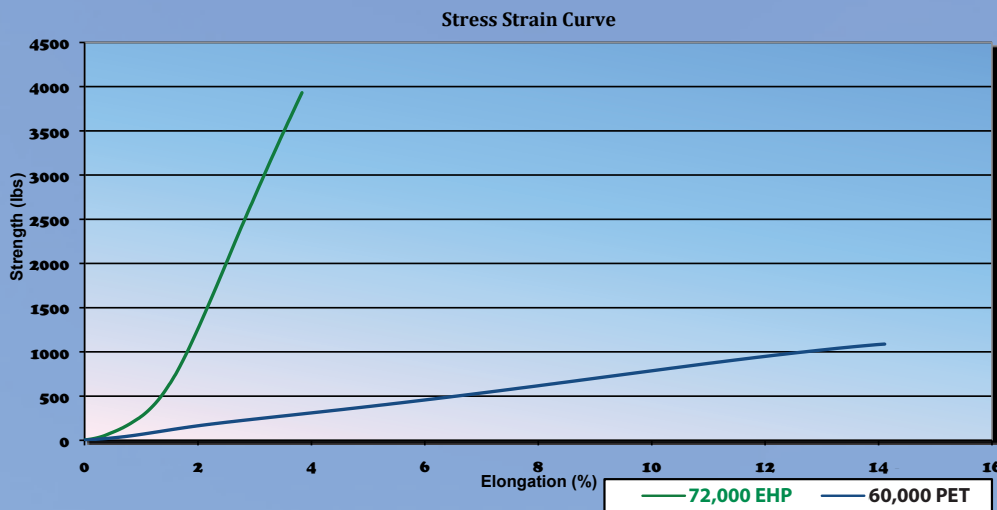
## EHP Engineered Hybrid Power®

Core Yarns for High Performance Roundslings featuring Honeywell Spectra® fiber

Testing Below Done at  
Honeywell's Advanced Fibers  
& Composites Lab

### Tensile Strength and the effect of cyclic loading

Sample	Applied load (lb)	Tensile Strength (lb)			Tensile Strength Increase (%)	
		As received	after 25 cycles cyclic loading	after 50 cycles cyclic loading	after 25 cycles cyclic loading	after 50 cycles cyclic loading
72k EHP w/Green	720	3,888	3,926	4,011	1.0%	3.2%
108k EHP w/Red	980	5,212	5,309	5,378	1.9%	3.2%



Material Used	EHP Type (denier)	Certified Breaking Strength	Twist Level	Put-up on 2.36" I.D. x 12.6" Tubes	Length per Standard Package
Custom Blend of HMPE Spectra® & Aramid	72k EHP Green Tracer	3,300 lbs Minimum	0.5 Z tpi (20 Z tpm)	~25 lb pkg (~13" OD)	1,400 meters (4,595 ft)
	108k EHP Red Tracer	4,500 lbs Minimum			925 meters (3,035 ft)

Honeywell Spectra® fiber is a registered trademark of Honeywell International Inc.

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### Typical Benchmark Results

# of wraps	Break Test (lbs)	For Comparison Purposes Only	
15	92,740	EHP not recommended <15 wraps	
24	86,000	1 7/8" tube	In general, the wider the jacket the better the results
24	90,000	2" tube	
24	107,000	2.5" tube	
30	114,200	Mfg A	Results among different sling manufacturers can vary widely
30	126,000	Mfg B	
30	138,270	Mfg C	
30	147,000	Mfg D	
30	160,000	Mfg E	
50	320,000	108k	108k EHP is recommended for High Capacity Slings
72	400,000	108k	
90	500,000	108k	
315	978,000	108k 1 bundle	For max efficiency, separate into 2 bundles
250	1,000,000	108k 2 bundles	

### General Guidelines

EHP core yarns for High Performance Roundslings have less than one third the stretch of high tenacity polyester and therefore are less "forgiving".

- Polyester elongation is ~12% at break vs. less than 4% for EHP core yarns.
- At working load, EHP stretch is well under 1%.
- Best results are obtained when the wraps are kept as even in length and tension as possible.
- Slack or drooping ends will NOT "pull out" and equalize like they do in polyester roundslings.

Proof testing (up to ten times at 2x working load) is recommended for all High Performance Roundslings.  
Per Cordage Institute CI-1905 standard, maximum temperature for all HMPE roundslings is 158 F (70 C).

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Using this product to fabricate slings requires refined skills to manufacture a good suitable roundsling. As all sling makers fabrication methods differ, each sling manufacturer must do their own testing to determine the suitable rating of their products. While Filtec's 72k EHP yarn is over three times stronger than 60,000 denier PES, this does not necessarily make slings made with the same # wraps three times stronger. Only internal testing by the manufacturer can verify their suitable rating.