

Weaving the Future in Material

The dreams of mankind can be read across the sky.

But to fly high with these dreams requires many advanced technologies.

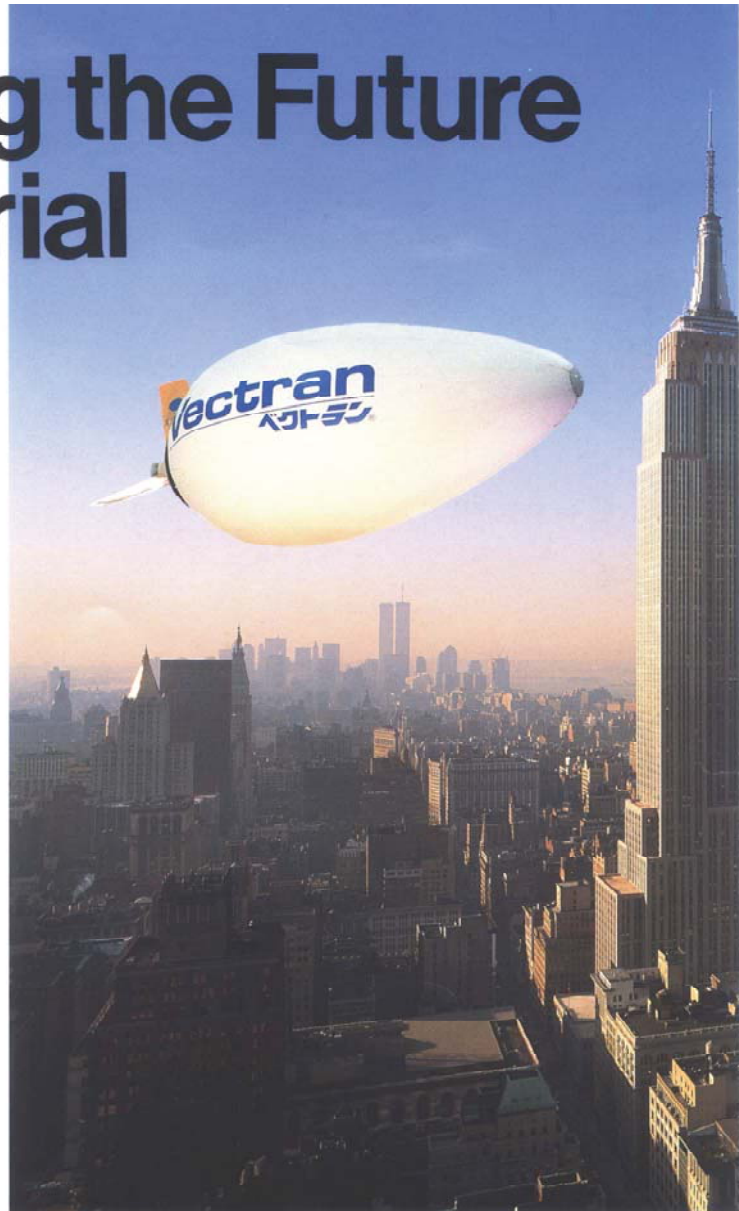
The desire to fly has inspired amazing innovations, brings us closer to our dreams, and drives the development of better tools, technologies, and human abilities.

VECTRAN from Kuraray is the material of dreams.

VECTRAN features outstanding specifications made possible by advanced technology.

VECTRAN is a superhigh strength fiber that dramatically advances textile performance in everything from sporting gear to industrial materials.

The dreams of man are best answered by the unlimited possibilities of new innovations.



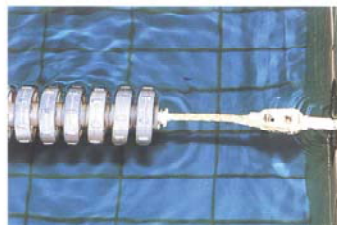
Optical fiber cable

With high strength, high modulus, and low moisture absorptivity, VECTRAN resists water and assures low creep characteristics, the ideal tension member for optical fiber cables.



Electric carpets

VECTRAN can also be used as the core for heating wires in electric carpets. High strength, high modulus, VECTRAN protects electric wire. Good heat and wear resistance characteristics also stand up to hard-use conditions.



Course rope

VECTRAN is also used in lane buoys in competitive swimming pools. VECTRAN is better than wire because it won't corrode, is light, and offers low creep. VECTRAN lane wire is the preferred choice of many competition pools.



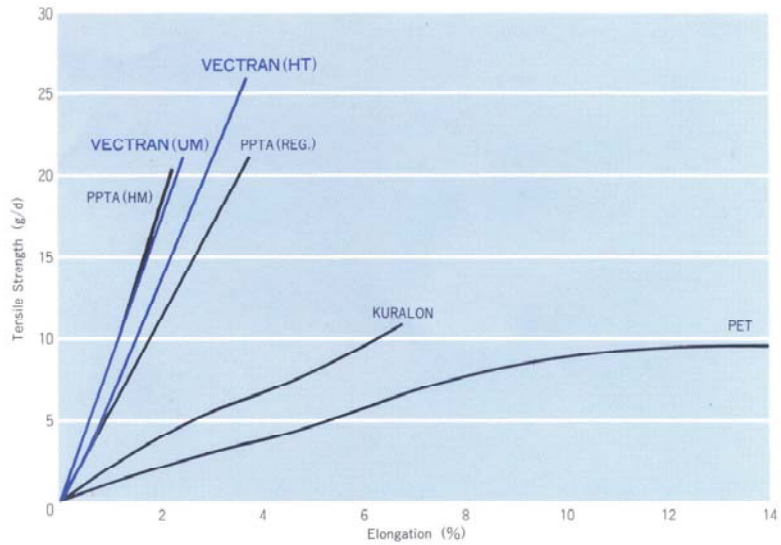
Rope

VECTRAN offers better wear resistance and bending fatigue resistance than aramid fibers, providing a tough, high strength rope. VECTRAN ropes of various weights and designs are available for different applications.

VECTRAN. The New Superhigh Strength, High Tenacity Polyarylate Fiber for Sports and Industry.

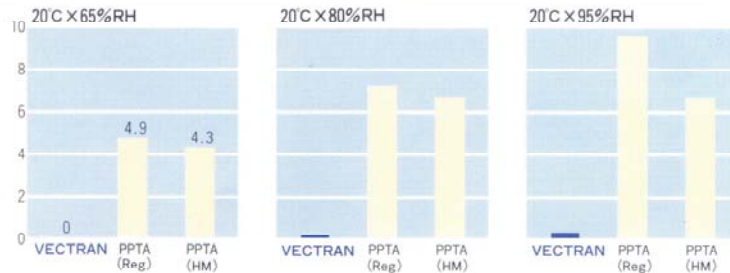
High Tenacity Polyaryyl

Stress v. Strain of Yarns (1500d)

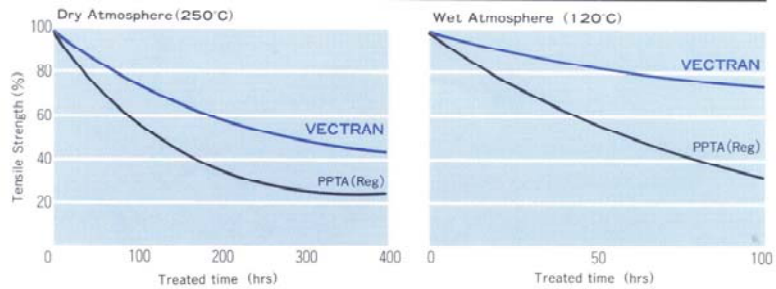


Properties	Polyarylate Fiber		Polyaramide Fiber		
	VECTRAN (HT)	VECTRAN (UM)	PPTA (REG.)	PPTA (HM)	
Density (g/cm ³)	1.41	1.37	1.44	1.45	
Decomposition Temp. (°C)	> 400	> 400	> 400	> 400	
Limited Oxygen Index (%)	28	27	30	—	
Multi-Filaments Yarn	Tensile Strength (g/d)	26	22	22	22
	(kg/mm ²)	330	271	284	287
	Breaking Elongation (%)	3.8	2.4	3.9	2.3
	Initial Modulus (g/d)	600	880	558	877
	(kg/mm ²)	7610	10850	7230	11440
	Tensile Strength at wet atmosphere (g/d)	26	22	20	21
Tensile Strength Ratio of Wet/Dry (%)	98	98	91	95	

Moisture Absorption Properties (%)



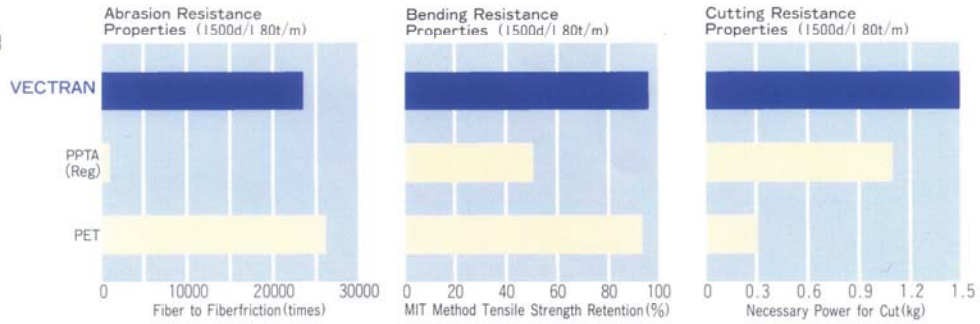
Tensile Strength Retention



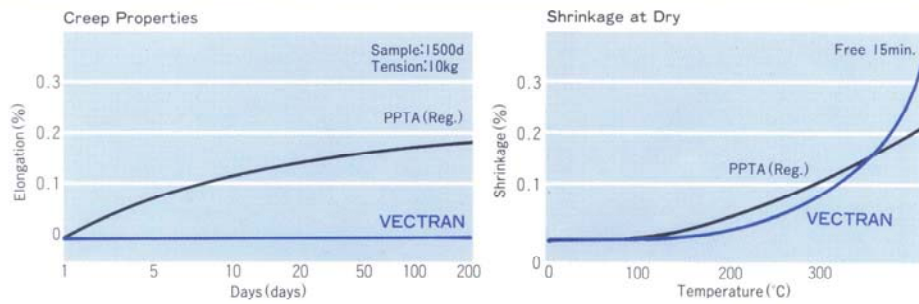
ate fiber

(Measurement method : Kuraray method)

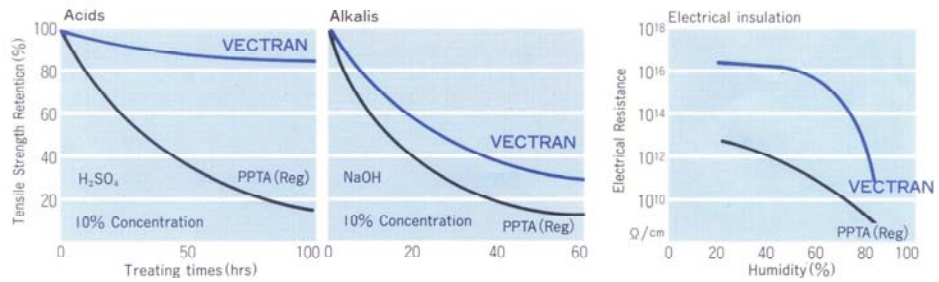
Abrasion Resistance Properties Cutting Resistance Properties



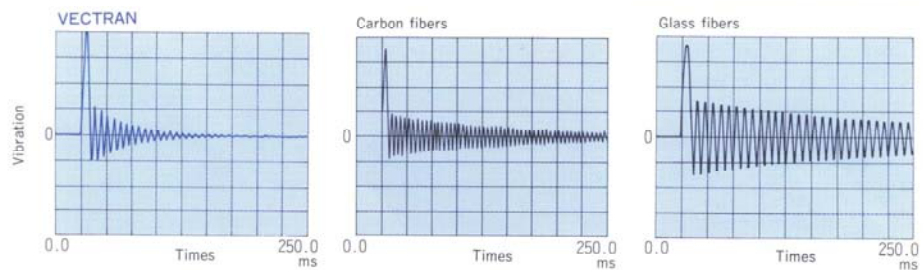
Contraction rate



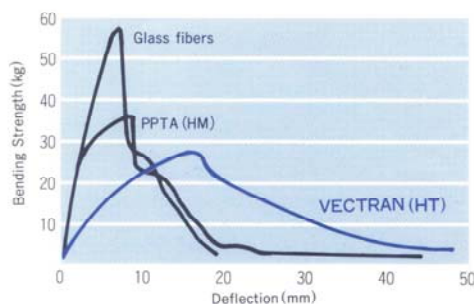
Solvent Resistance Properties



Periodic Damping Properties of VECTRAN reinforced Composite (Matrix Resin: Epoxy)



Bending Properties of VECTRAN reinforced Composite (Matrix Resin: Epoxy)



Vectran