



TECAST VEKTON™

(Cast nylon)

TECAST VEKTON™ cast nylon, available in a variety of grades, offers a combination of good mechanical properties, excellent bearing and wear characteristics, and the large-size capabilities of the casting process. Its fatigue resistance, noise damping ability, corrosion resistance, and light weight make TECAST VEKTON™ ideal for metal replacement applications, such as bearings, gears, sheaves, and sprockets.

At one-eighth the weight of bronze, TECAST VEKTON™ is easier to handle and maintain than metals such as iron, aluminum, brass, and bronze, which it typically replaces in industrial wear applications.

Other materials that TECAST VEKTON™ commonly replaces because of its superior performance are laminated phenolics, elastomers, and wood.

TECAST VEKTON™ has

excellent wear and abrasion resistance, resulting in extended component life and lower maintenance cost. Its formulations are readily available in rod, plate, and tube. Nonstandard shapes, such as rings, discs, and blocks can be economically produced in small quantities with short lead times. Custom parts can be cast-to-size or near-net-shape with relatively inexpensive tooling.

- **TECAST VEKTON™ 6PA NATURAL**

An FDA-compliant cast type 6 nylon used in applications requiring cast nylon advantages without fillers.

- **TECAST VEKTON™ 6PA BLACK**

A black cast type 6 nylon that is more UV resistant than 6PA natural.

- **TECAST VEKTON™ 6PA BLUE**

A blue cast type 6 nylon with properties similar to 6PA natural.

- **TECAST VEKTON™ 6PAM**

A molybdenum disulfide-filled cast type 6 nylon used for general bearings and wear applications because of its superior strength and hardness.

- **TECAST VEKTON™ 6PAG**

A graphite powder-filled cast type 6 nylon with properties similar to 6PAM but better suited to wet applications.

- **TECAST VEKTON™ 6XAU**

A high heat (up to 260°F continuous), weather resistant cast type 6 nylon with superior fatigue-resistance and bearing properties.

- **TECAST VEKTON™ 6PAL**

An oil-filled cast type 6 nylon used in applications requiring excellent bearing and wear properties where external lubrication is difficult or impractical.

Its unique combination of strength, wear resistance, toughness, machinability, and corrosion resistance make TECAST VEKTON™ cast nylon ideal for bearings, thrust washers, bushings, wear pads, sheaves, rollers, gears, sprockets, and wheels. TECAST VEKTON™ is commonly used in construction equipment, material handling systems, amusement park rides, pulp and paper processing equipment, steel mills and industrial

TYPICAL PROPERTY VALUES

	PROPERTIES	ASTM Test Method	Units	Tecast Vekton® 6PA	Tecast Vekton® 6XAU	Tecast Vekton® 6PAM 6PAG	Tecast Vekton® 6PAL
PHYSICAL	Density	D792	lbs/in ³	.0416-.0419	.0416-.0419	.0416-.0423	.0412-.0416
	Specific Gravity	D792	g/cc	1.15 - 1.16	1.15 - 1.16	1.15 - 1.17	1.14 - 1.15
	Water Absorption, @ 24 hours, 73°F	D570	%	1.2	1.2	1.2	.75
	@ Saturation, 73°F	D570	%	-	-	-	-
MECHANICAL	Tensile Strength @ Yield, 73°F	D638	psi	10,000	11,000	11,000	8,800
	Tensile Modulus	D639	psi	350,000	350,000	350,000	350,000
	Elongation @ Break, 73°F	D638	%	25	20	20	25
	Flexural Strength, 73°F	D790	psi	12,500	12,500	12,500	12,500
	Flexural Modulus, 73°F	D790	psi	350,000	350,000	350,000	325,000
	Compressive Strength	D695	psi	-	-	-	-
	Izod Impact Strength, 73°F	D256	ft-lbs/in	.6	.7	.6	1.2
	Rockwell Hardness, 73°F	D785	R Scale	115	115	115	100
	Shure Hardness	-	D Scale	-	-	-	-
	Wear Factor Against Steel, 40 psi, 50 fpm	D3702	in ³ x $\frac{1}{hr}$	200 x 10 ⁻¹⁰	-	-	-
	Static Coefficient of Friction	D3702	-	-	-	-	-
	Dynamic Coefficient of Friction, 40 psi, 50 fpm	D3702	-	.26	-	-	-
	THERMAL	Heat Deflection Temperature @ 66 psi	D648	°F	370	370	370
@ 264 psi		D648	°F	200	200	200	-
Coefficient of Linear Thermal Expansion		D696	in/in/°F	4.0 x 10 ⁻⁵	4.0 x 10 ⁻⁵	4.0 x 10 ⁻⁵	4.0 x 10 ⁻⁵
Maximum Servicing Temperature, Intermittent		-	°F	300	350	300	330
Long Term		UL746B	°F	200	260	200	200
Specific Heat		-	BTU/lb-°F	.40	-	-	-
Thermal Conductivity		-	-	1.67	-	-	-
Vicat Softening Point		-	°F	-	-	-	-
Melting Point		D2133	°F	428	428	428	428
Flammability		UL94	-	HB	-	-	-
ELECTRICAL	Surface Resistivity	D257	ohm/square	-	-	-	-
	Volume Resistivity	D257	ohm-cm	10 ¹⁴	10 ¹⁴	-	-
	Dielectric Strength	D149	V/mil	500	500	500	-
	Dielectric Constant, @ 60 Hz, 73°F, 50% RH	D150	-	3.7	3.7	3.7	-
	@ 1 MHz	D150	-	-	-	-	-
	@ 20 GHz	D150	-	-	-	-	-
	@ 30 GHz	D150	-	-	-	-	-
	Dissipation Factor, @ 60 HZ, 73°F	D150	-	-	-	-	-

This information is only to assist and advise you on current technical knowledge and is given without obligation or liability. All trade and patent rights should be observed. All rights reserved. Data obtained from extruded shapes material.

MATERIAL AVAILABILITY

Rods: Diameters: 2" - 8" diameter, 4' length
9" to 20" diameter, 12' length

Plates: 1/4" to 4" thickness inclusive are 2' x 4', 4' x 4' and 4' x 8'
3/8" and greater also available in 4' x 8'

Primary Specification (Typical)

6PA: L-P-410a
6PAM: L-P-410a Wear Resistant

Shapes Specification (Typical)

6PA: ASTM-D-5989 S-PA0211 **6PAL:** ASTM-D-5989 S-PA0251
6PAM: ASTM-D-5989 S-PA0221

Profiles, tubes, and special sizes are custom-produced on request.



ENSINGER-HYDE

ASK. THINK. SUCCEED.



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