

TECAST VEKTON™

(Marine Industry)

TECAST VEKTON high performance cast nylon has proven to be extremely effective in workboat, harbor-side, off-shore, and inland water applications. Used in original equipment or during maintenance, it often replaces steel, cast iron, bronze, aluminum, wood, rubber, or laminated phenolics for making bushings, bearings, gear wheels, rollers, wear plates, and other components.

Two applications in which TECAST VEKTON has proven particularly effective are rudder bearings and pedestal crane sheaves. TECAST VEKTON rudder bearings last 2 to 3 times longer than the bronze bearings they replace on

inland river towboats due to the high impact resistance, vibration damping, and self-lubricating qualities of the material. In addition, the rudder post shaft sleeves on these boats show minimal out-of-round wear and do not require replacement each time the bearing is replaced as is the case with bronze bearings.

TECAST VEKTON sheaves for boom-tip locations on marine pedestal cranes have been equally effective. They provide longer endurance life, as much as 450%, for the wire rope when compared to steel sheaves. In addition, cast nylon sheaves are 1/7 the

weight of steel, resulting in increased lifting capacity and improved crane stability. TECAST VEKTON sheaves offer longer service life at lower cost than steel.

Ask for details regarding approvals of TECAST VEKTON cast nylon parts for use in marine applications.



6PA Rudder Bearings are available in several sizes

- **Longer Life—**
TECAST VEKTON parts typically last 2 to 3 times longer than conventional materials.
- **Lightweight—**
TECAST VEKTON is 1/8 the weight of bronze and 1/7 the weight of steel.
- **Outstanding Physical Properties—**
TECAST VEKTON combines high tensile and impact strength, corrosion and abrasion resistance, and “self-lubrication”.

Typical Applications for TECAST VEKTON in the marine industry include: rudder shaft bearings for towboats; bearings for deck winches and capstans; bearings and wear plates for dredging barges; rail wheel bearings for dry dock cradles; rollers for conveyors; cable sheaves for gantry cranes; bearings, roll covers; wear plates for off-shore platforms; and gate bearings and gears for waterway locks.

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
	Shore Hardness	—	D Scale	—	—	—	—
	Wear Factor Against Steel, 40 psi, 50 fpm	D3702	$\frac{\text{in}^3 \times 1}{\text{hr} \times \text{PV}}$	200 x 10 ⁻¹⁰	—	—	—
	Static Coefficient of Friction	D3702	—	—	—	—	—
	Dynamic Coefficient of Friction, 40 psi, 50 fpm	D3702	—	.26	—	—	—

ELECTRICAL	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	—	—	—

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.

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



Custom parts are available in sizes up to 90" in diameter and weights up to 1,200 pounds.

DISTRIBUTED BY

Division of Ensinger, Inc.

1 Main Street
Grenloch, New Jersey 08032
Telephone: 800.243.3221
856.227.0500
FAX: 856.232.1754
E-mail: sales@ensinger-ind.com

HEADQUARTERS
365 Meadowlands Boulevard
Washington, Pennsylvania 15301
Telephone: 724.746.6050
FAX: 724.746.9209
Web site: www.shopforplastics.com