



TECHNICAL INFORMATION

TIVAR[®] Oil Filled

Physical Properties

Property	Method	SI Unit	SI Value	English Unit	English Value
Density	ASTM D-792	kg/m ³	927-938	lbs/ft ³	57.8-58.5
Yield Point	ASTM D-638	MPa	17.8-18.4	psi	2580-2670
Elongation at Yield	ASTM D-638	%	12-18	%	12-18
Tensile Break	ASTM D-638	MPa	50	psi	7252
Elongation at Break	ASTM D-638	%	280	%	280
Tensile Modulus	ASTM D-638	MPa	524	psi	76000
Flexural Modulus	ASTM D-790	MPa	440	psi	63818
Izod Impact (Double Notch)	ASTM D-4020	kJ/m ²	76	ft-lbs/in ²	36.2
Tensile Impact	DIN 53448	kJ/m ²	2868	ft-lbs/in ²	1366
Sand Wheel Wear	ASTM G-65,	T-1000=100	110	T-1000=100	110
Hardness	ASTM D-2240	Shore D	65	Shore D	65
Static Friction	ASTM D-1894	Unitless	0.208	Unitless	0.208
Dynamic Friction	ASTM D-1894	Unitless	0.195	Unitless	0.195
Coefficient of Thermal Exp.	ASTM D-696	^o C ⁻¹	0.00018	^o F ⁻¹	0.00011
Melt Point	ASTM D-3417	^o C	137-143	^o F	278-289
Compressive Modulus	ASTM D-695	MPa	290	psi	42062
Compressive Deformation	ASTM D-621	% at 454.5 kg	na	% at 1000 psi	na
Volume Resistivity	ASTM D-257	Ohm-cm	>10 ¹⁵	Ohm-cm	>10 ¹⁵
Surface Resistivity	ASTM D-257	Ohm	>10 ¹⁵	Ohm	>10 ¹⁵
Water Absorption	ASTM D-570	%	nil	%	nil

* Values are averages and are not specifications.

** ASTM test methods are under current procedures.

IMPORTANT: Most plastics will ignite and sustain flame under certain conditions. Caution is urged where any material may be exposed to open flame or heat-generating equipment. Use [Material Safety Data Sheets](#) to determine auto-ignition and flashpoint temperatures of materials, or consult Poly Hi Solidur, Fort Wayne, Indiana if additional information is needed. The information contained herein is believed to be reliable, but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained therefrom. The information is based on laboratory work with small-scale equipment and does not necessarily indicate end product performance. Because of the variations in methods, conditions and equipment used commercially in processing these materials, no warranties or guarantees are made as to the suitability of the products for the applications disclosed. Full-scale testing and end product performance are the responsibility of the user. Poly Hi Solidur, Inc. shall not be liable and the customer assumes all risk and liability of any use or handling of any material beyond Poly Hi Solidur's direct control. **THE SELLER MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.** Nothing contained herein is to be considered as permission, recommendation, nor as an inducement to practice any patented invention without permission of the patent owner.

