



# TECHNICAL INFORMATION

## TIVAR® 1000

### Physical Properties

Property	Method	SI Unit	SI Value	English Unit	English Value
Density	ASTM D-792	kg/m <sup>3</sup>	930	lbs/ft <sup>3</sup>	58.01
Yield Point	ASTM D-638	MPa	21	psi	3050
Elongation at Yield	ASTM D-638	%	15	%	15
Tensile Break	ASTM D-638	MPa	40	psi	5800
Elongation at Break	ASTM D-638	%	250	%	250
Tensile Modulus	ASTM D-638	MPa	820	psi	120000
Flexural Modulus	ASTM D-790	MPa	760	psi	110000
Izod Impact	ASTM D-4020	kJ/m <sup>2</sup>	70	ft-lbs/in <sup>2</sup>	34
Tensile Impact	DIN 53448	kJ/m <sup>2</sup>	2200	ft-lbs/in <sup>2</sup>	1050
Sand Wheel Wear	ASTM G-65,	AR-01 Steel=100	90	AR-01 Steel=100	90
Hardness	ASTM D-2240	Shore D	68	Shore D	68
Static Friction	ASTM D-1894	Unitless	0.15	Unitless	0.15
Dynamic Friction	ASTM D-1894	Unitless	0.12	Unitless	0.12
Coefficient of Thermal Exp.	ASTM D-696	°C <sup>-1</sup>	0.0002	°F <sup>-1</sup>	0.00011
Melt Point	ASTM D-3417	°C	137-143	°F	278-289
Maximum Operating Temp.		°C	82	°F	180
Compressive Modulus	ASTM D-695	MPa	536	psi	77750
Compressive Deformation	ASTM D-621	% at 454.5 kg	'6-8	% at 1000 psi	6-8
Volume Resistivity	ASTM D-257	Ohm-cm	>10 <sup>15</sup>	Ohm-cm	>10 <sup>15</sup>
Surface Resistivity	ASTM D-257	Ohm	>10 <sup>15</sup>	Ohm	>10 <sup>15</sup>
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.

