



HIGH IMPACT SHIMMERS: PROPERTY CHART

MECHANICAL PROPERTY	UNITS	ASTM TEST	HIPS POLYMER
specific gravity	-	D792	1.05
tensile strength, 73°	PSI	D638	8,000-10,000
tensile modulus of elasticity, 73°	PSI	D638	240,000
tensile modulus of elongation, 73°	%	D638	3
flexural strength, 73°	PSI	D790	10,000-15,000
flexural modulus of elasticity, 73°	PSI	D790	-
shear strength	PSI	D732	7,500-8,000
compressive strength	PSI	D695	10,000 w/ no fracture
compressive modulus of elasticity, 73°	PSI	D695	
coefficient of friction	-	-	-
(dry vs. Steel) dynamic	-	-	-
hardness, rockwell, 73°	-	D785	R110-120
hardness, durometer, 73°	-	D676	D80-85
tensile impact, 73°	Ft. lb. in 2	D1822	-
THERMAL PROPERTY			
coefficient of linear thermal expansion	in./in./°F	D696	5.0x10(-5)
deformation under load (122°F 2,000 PSI)	%	D621	1
deflection temperature: 264 PSE	°F	D648	200-225
66PSI	°F	D648	-
melting point	°	D789	187
continuous service temp in air (maximum)	°F	-	215
ELECTRICAL PROPERTY			
dielectric strength short time	volts/mil	D149	700-1,200
volume resistivity	OHM-CM	D257	10
dielectric constant: 60HZ	-	D150	2.55
10/cubed HZ	-	D150	2.55
10/sixth HZ	-	D150	2.55
CHEMICAL PROPERTY			
Water absorption immersion: 24 hours	%	D570	0.02-0.03
Acids: Weak 73°			A
Strong 73°			A
Alkalies: Weak 73°			A
Strong 73°			A
Hydrocarbons Aromatic 73°			U
Hydrocarbons Aliphatic 73°			U
Ketones 73°			L
Ethers 73°			L
Esters 73°			L
Alcohols			L
Inorganic Salt Solutions, 73°			L
Continuous Sunlight 73°			-

KEY

- A= ACCEPTABLE SERVICE
- L=LIMITED SERVICE
- U=UNACCEPTABLE SERVICE



Coefficient of friction on our PE shim (UHMW) is as follows:
ASTM D-1894

Shim vs. Shim

Static 0.20 - 0.30
Kinetic 0.20 - 0.30

Mild Steel vs. Shim

Static 0.15 - 0.20
Kinetic 0.12 - 0.20

Mild Steel vs. Mild Steel

Static 0.30 - 0.40
Kinetic 0.25 - 0.35

The following sheet is on our non-skid shim. Hope this info helps

TEST RESULTS:

The test results are as follows:

<u>Conditions</u>	<u>Static Coefficient of Friction</u>	<u>Kinetic Coefficient of Friction</u>
Coated to Coated	.802	.750
Coated to Smooth	.508	.464
Coated to Hot Rolled Steel	.473	.445

One test per condition was conducted as requested.

A flat sheet of hot rolled steel plate with a good surface was used for testing. When using the results of this test for comparative purposes please note that the surface roughness affects the Coefficient of Friction results.