

Mitsubishi Chemical Advanced Materials Durapro® Truck Liners (ASTM Product Data Sheet)

Categories: Polymer; Thermoplastic; Polyethylene (PE)

Material Notes: Quadrant Engineering Plastic Products is now Mitsubishi Chemical Advanced Materials.

Physical Properties	Metric	English	Comments
Specific Gravity	0.940 g/cc	0.940 g/cc	ASTM D792
Water Absorption	<= 0.010 %	<= 0.010 %	Immersion, 24hr; ASTM D570(2)
Water Absorption at Saturation	<= 0.010 %	<= 0.010 %	ASTM D 570(2)

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	67	67	ASTM D2240
Tensile Strength	32.4 MPa	4700 psi	ASTM D638
Tensile Strength at 65°C (150°F)	2.76 MPa	400 psi	ASTM D638
Elongation at Break	200 %	200 %	ASTM D638
Tensile Modulus	0.565 GPa	82.0 ksi	ASTM D638
Flexural Strength	23.4 MPa	3400 psi	ASTM D790
Flexural Modulus	0.607 GPa	88.0 ksi	ASTM D790
Compressive Strength	19.3 MPa	2800 psi	10% Def.; ASTM D695
Compressive Modulus	0.452 GPa	65.5 ksi	ASTM D695
Shear Strength	62.1 MPa	9000 psi	ASTM D732
Izod Impact, Notched	18.69 J/cm	35.00 ft-lb/in	ASTM D256
Coefficient of Friction, Dynamic	0.080	0.080	dry vs. steel; QTM55007
Sand Slurry	15	15	1018 steel = 100; ASTM D4020
Limiting Pressure Velocity	0.0701 MPa-m/sec	2000 psi-ft/min	4:1 safety factor applied; QTM 55010
Abrasion	130	130	Sand Wheel; TIVAR® 1000 = 100; ASTM G-65

Electrical Properties	Metric	English	Comments
Surface Resistivity per Square	1e+13 - 1e+15 ohm	1e+13 - 1e+15 ohm	EOS/ESD S11.11
Dielectric Constant	2.3 @Frequency 1.00e+6 Hz	2.3 @Frequency 1.00e+6 Hz	ASTM D150
Dissipation Factor	<= 0.00050 @Frequency 1.00e+6 Hz	<= 0.00050 @Frequency 1.00e+6 Hz	ASTM D150

Thermal Properties	Metric	English	Comments
CTE, linear	234 µm/m-°C @Temperature -40.0 - 150 °C	130 µin/in-°F @Temperature -40.0 - 302 °F	ASTM E831
Melting Point	135 °C	275 °F	Crystalline, Peak; ASTM D3418
Maximum Service Temperature, Air	82.2 °C	180 °F	Continuous
Deflection Temperature at 1.8 MPa (264 psi)	46.7 °C	116 °F	ASTM D648
Flammability, UL94	HB @Thickness 3.17 mm	HB @Thickness 0.125 in	

Compliance Properties	Metric	English	Comments
3A-Dairy	No	No	
Canada AG	No	No	
FDA	No	No	
NSF	No	No	
USDA	No	No	
USP Class VI	No	No	

Chemical Resistance Properties	Metric	English	Comments
Acids, Strong (pH 1-3)	Acceptable	Acceptable	
Acids, Weak	Acceptable	Acceptable	
Alcohols	Acceptable	Acceptable	
Alkalies, Strong (pH 11-14)	Acceptable	Acceptable	
Alkalies, Weak	Acceptable	Acceptable	
Chlorinated Solvents	Unacceptable	Unacceptable	
Conductive / Static Dissipative	No	No	
Continuous Sunlight	Limited	Limited	
Hot Water / Steam	Limited	Limited	
Hydrocarbons - Aliphatic	Unacceptable	Unacceptable	
Hydrocarbons - Aromatic	Unacceptable	Unacceptable	