Omnia Plastica PVC Polyvinylchloride

Category : Polymer , Thermoplastic , Vinyl (PVC) , PVC, Extruded

Material Notes:

A widely used material, its application is under regulation in many countries for ecological reasons and it is often substituted by PP or other polymers. It is chosen for its chemical resistance.Features:High chemical resistance Higher stiffness compared to polyolefins Easy machinability on mechanical tools. It can be hot welded Colour: grey, ivory, redWeak Point:Compared to PP it has lower shock and temperature resistance. The high gravity reduces its cheapness.Application:Chemical: the main application of PVC is in the chemical industry, thanks to its high resistance to acids and alkali and to its rigidity. It is used for components such as valves, flanges, gears, etc. in the chemical, galvanic and petrochemical industries. Food contact: it cannot be used in contact with food. Electrical: good dielectric properties and weather resistance make it suitable for these applications. Mechanical: it is also used for mechanical components in corrosive environments. Compared to polyolefins, it has a higher tensile stress.Information provided by Omnia Plastica s.p.a. for semifinished products such as sheet, rod, and tube.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Omnia-Plastica-PVC-Polyvinylchloride.php

Physical Properties	Metric	English	Comments
Density	1.40 g/cc	0.0506 lb/in³	ISO.1183 DIN.53479
Moisture Absorption at Equilibrium	0.10 %	0.10 %	50% relative humidity
Water Absorption at Saturation	0.10 %	0.10 %	23°C

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	97	97	dry sample; ISO2039.2
Ball Indentation Hardness	75.0 MPa	10900 psi	ISO2039.1 DIN.53456
Tensile Strength at Break	55.0 MPa	7980 psi	ISO.527 DIN.53455
Elongation at Break	20 %	20 %	ISO.527 DIN.53455
Tensile Modulus	2.60 GPa	377 ksi	ISO.527 DIN.53455
Compressive Strength	7.00 MPa	1020 psi	1% strain over 1000 hours; ISO.899 DIN.53444
Charpy Impact Unnotched	1.50 J/cm²	7.14 ft-lb/in²	7.5 J; ISO.R179 DIN.53453
Charpy Impact, Notched	0.400 J/cm²	1.90 ft-lb/in²	ISO179/3C DIN.53453

Thermal Properties	Metric	English	Comments
CTE, linear	80.0 µm/m-°C @Temperature 23.0 - 60.0 °C	44.4 µin/in-°F @Temperature 73.4 - 140 °F	

Thermal Properties	Metric	English	Comments
Melting Point	80.0 °C	176 °F	
Maximum Service Temperature, Air	60.0 °C	140 °F	Maximum operating temperature continuously for 5000 hours based on a tensile stress of 50% at 23° C.
	65.0 °C	149 °F	short period, no load
Deflection Temperature at 1.8 MPa (264 psi)	60.0 °C	140 °F	ISO.75 DIN.53461
Minimum Service Temperature, Air	-5.00 °C	23.0 °F	impact conditions and heavy loads not considered
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	ISO.93 DIN.53482
Dielectric Constant	3.0 @Frequency 1e+6 Hz	3.0 @Frequency 1e+6 Hz	ISO.250 DIN.53483
Dielectric Strength	50.0 kV/mm	1270 kV/in	ISO.243 DIN.53481
Dissipation Factor	0.015 @Frequency 1e+6 Hz	0.015 @Frequency 1e+6 Hz	ISO.250 DIN.53483

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