

DuPont Performance Polymers Delrin® 127UV NC010 Acetal (POM) (Unverified Data**)

Category : Polymer , Thermoplastic , Acetal (POM) , Acetal Homopolymer, Unreinforced

Material Notes:

UV Stabilized High Viscosity Acetal Homopolymer Delrin 127UV is a high viscosity acetal homopolymer with UV stabilizers developed for automotive interior applications. It has improvements in UV aging characteristics and thermal stability over Delrin 107. Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Delrin-127UV-NC010-Acetal-POM-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments	
Density	1.42 g/cc	0.0513 lb/in ³	ISO 1183	
Water Absorption	1.2 % @Thickness 2.00 mm	1.2 % @Thickness 0.0787 in	Sim. to ISO 62	
Moisture Absorption	0.300 % @Thickness 2.00 mm	0.300 % @Thickness 0.0787 in	Sim. to ISO 62	
Viscosity	138000 cP @Shear Rate 5000 1/s, Temperature 230 °C	138000 cP @Shear Rate 5000 1/s, Temperature 446 °F	ISO 11403-1 -2	
	147000 cP @Shear Rate 5000 1/s, Temperature 215 °C	147000 cP @Shear Rate 5000 1/s, Temperature 419 °F	ISO 11403-1 -2	
	157000 cP @Shear Rate 5000 1/s, Temperature 200 °C	157000 cP @Shear Rate 5000 1/s, Temperature 392 °F	ISO 11403-1 -2	
	649000 cP @Shear Rate 500 1/s, Temperature 230 °C	649000 cP @Shear Rate 500 1/s, Temperature 446 °F	ISO 11403-1 -2	
	723000 cP @Shear Rate 500 1/s, Temperature 215 °C	723000 cP @Shear Rate 500 1/s, Temperature 419 °F	ISO 11403-1 -2	
	804000 cP @Shear Rate 500 1/s, Temperature 200 °C	804000 cP @Shear Rate 500 1/s, Temperature 392 °F	ISO 11403-1 -2	
	Linear Mold Shrinkage, Flow	0.021 cm/cm	0.021 in/in	ISO 294-4 2577
	Linear Mold Shrinkage, Transverse	0.019 cm/cm	0.019 in/in	ISO 294-4 2577

Physical Properties	Metric	English	Comments
Melt Flow	@Load 2.16 kg, Temperature 190 °C	@Load 4.76 lb, Temperature 374 °F	cm ³ /10min; ISO 1133
	2.4 g/10 min	2.4 g/10 min	ISO 1133
	@Load 2.16 kg, Temperature 190 °C	@Load 4.76 lb, Temperature 374 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	92	92	ISO 2039-2
Hardness, Rockwell R	120	120	ISO 2039-2
Tensile Stress	10.0 MPa	1450 psi	ISO 11403-1 -2
	@Strain 1.00 %, Temperature 90.0 °C	@Strain 1.00 %, Temperature 194 °F	
	27.0 MPa	3920 psi	ISO 11403-1 -2
	@Strain 4.20 %, Temperature 90.0 °C	@Strain 4.20 %, Temperature 194 °F	
	32.5 MPa	4710 psi	ISO 11403-1 -2
	@Strain 7.30 %, Temperature 90.0 °C	@Strain 7.30 %, Temperature 194 °F	
	33.4 MPa	4840 psi	ISO 11403-1 -2
	@Strain 10.4 %, Temperature 90.0 °C	@Strain 10.4 %, Temperature 194 °F	
	33.9 MPa	4920 psi	ISO 11403-1 -2
	@Strain 1.40 %, Temperature 23.0 °C	@Strain 1.40 %, Temperature 73.4 °F	
	35.9 MPa	5210 psi	ISO 11403-1 -2
	@Strain 1.90 %, Temperature 40.0 °C	@Strain 1.90 %, Temperature 104 °F	
	50.1 MPa	7270 psi	ISO 11403-1 -2
	@Strain 2.20 %, Temperature 0.000 °C	@Strain 2.20 %, Temperature 32.0 °F	
	55.0 MPa	7980 psi	ISO 11403-1 -2
	@Strain 2.10 %, Temperature -40.0 °C	@Strain 2.10 %, Temperature -40.0 °F	
	57.1 MPa	8280 psi	ISO 11403-1 -2
	@Strain 7.70 %, Temperature 40.0 °C	@Strain 7.70 %, Temperature 104 °F	

Mechanical Properties	Metric	English	Comments
	@Strain 2.60 %, Temperature -20.0 °C	@Strain 2.60 %, Temperature -4.00 °F	ISO 11403-1 -2
	60.1 MPa	8720 psi	
	@Strain 13.4 %, Temperature 40.0 °C	@Strain 13.4 %, Temperature 104 °F	ISO 11403-1 -2
	60.8 MPa	8820 psi	
	@Strain 5.40 %, Temperature 23.0 °C	@Strain 5.40 %, Temperature 73.4 °F	ISO 11403-1 -2
	66.0 MPa	9570 psi	
	@Strain 9.50 %, Temperature 23.0 °C	@Strain 9.50 %, Temperature 73.4 °F	ISO 11403-1 -2
	67.3 MPa	9760 psi	
	@Strain 13.6 %, Temperature 23.0 °C	@Strain 13.6 %, Temperature 73.4 °F	ISO 11403-1 -2
	73.2 MPa	10600 psi	
	@Strain 8.80 %, Temperature 0.000 °C	@Strain 8.80 %, Temperature 32.0 °F	ISO 11403-1 -2
	76.1 MPa	11000 psi	
	@Strain 15.4 %, Temperature 0.000 °C	@Strain 15.4 %, Temperature 32.0 °F	ISO 11403-1 -2
	77.1 MPa	11200 psi	
	@Strain 21.4 %, Temperature 0.000 °C	@Strain 21.4 %, Temperature 32.0 °F	ISO 11403-1 -2
	81.4 MPa	11800 psi	
	@Strain 10.4 %, Temperature -20.0 °C	@Strain 10.4 %, Temperature -4.00 °F	ISO 11403-1 -2
	84.5 MPa	12300 psi	
	@Strain 18.2 %, Temperature -20.0 °C	@Strain 18.2 %, Temperature -4.00 °F	ISO 11403-1 -2
	85.3 MPa	12400 psi	
	@Strain 26.0 %, Temperature -20.0 °C	@Strain 26.0 %, Temperature -4.00 °F	ISO 11403-1 -2
	96.0 MPa	13900 psi	
	@Strain 12.6 %, Temperature -40.0 °C	@Strain 12.6 %, Temperature -40.0 °F	ISO 11403-1 -2
	97.9 MPa	14200 psi	
	@Strain 25.1 %,	@Strain 25.1 %,	ISO 11403-1 -2

Mechanical Properties	Temperature -40.0 °C Metric	Temperature -40.0 °F English	Comments
	98.8 MPa	14300 psi	
	@Strain 37.7 %, Temperature -40.0 °C	@Strain 37.7 %, Temperature -40.0 °F	ISO 11403-1 -2
Tensile Strength, Yield	70.0 MPa	10200 psi	ISO 527-1/-2
Elongation at Break	45 %	45 %	Nominal; ISO 527-1/-2
Elongation at Yield	23 %	23 %	ISO 527-1/-2
Tensile Modulus	3.00 GPa	435 ksi	ISO 527-1/-2
Flexural Modulus	2.70 GPa	392 ksi	ISO 178
Shear Modulus	0.2165 GPa	31.40 ksi	
	@Temperature 120 °C	@Temperature 248 °F	Dynamic; ISO 11403-1 -2
	0.4832 GPa	70.08 ksi	
	@Temperature 70.0 °C	@Temperature 158 °F	Dynamic; ISO 11403-1 -2
	0.8266 GPa	119.9 ksi	
	@Temperature 20.0 °C	@Temperature 68.0 °F	Dynamic; ISO 11403-1 -2
	0.980 GPa	142 ksi	
	@Temperature -20.0 °C	@Temperature -4.00 °F	Dynamic; ISO 11403-1 -2
	1.1339 GPa	164.46 ksi	
	@Temperature -50.0 °C	@Temperature -58.0 °F	Dynamic; ISO 11403-1 -2
Secant Modulus	0.31978 GPa	46.381 ksi	
	@Strain 9.10 %, Temperature 100 °C	@Strain 9.10 %, Temperature 212 °F	ISO 11403-1 -2
	0.336 GPa	48.7 ksi	
	@Strain 29.3 %, Temperature -40.0 °C	@Strain 29.3 %, Temperature -40.0 °F	ISO 11403-1 -2
	0.37551 GPa	54.464 ksi	
	@Strain 9.80 %, Temperature 80.0 °C	@Strain 9.80 %, Temperature 176 °F	ISO 11403-1 -2
	0.392 GPa	56.8 ksi	
	@Strain 15.4 %, Temperature 40.0 °C	@Strain 15.4 %, Temperature 104 °F	ISO 11403-1 -2
	0.408 GPa	59.2 ksi	
	@Strain 20.8 %, Temperature -20.0 °C	@Strain 20.8 %, Temperature -4.00 °F	ISO 11403-1 -2

Mechanical Properties	Metric GPa	English	Comments
	@Strain 17.6 %, Temperature 0.000 °C	@Strain 17.6 %, Temperature 32.0 °F	ISO 11403-1 -2
	0.520 GPa	75.4 ksi	
	@Strain 4.50 %, Temperature 100 °C	@Strain 4.50 %, Temperature 212 °F	ISO 11403-1 -2
	0.611 GPa	88.6 ksi	
	@Strain 10.9 %, Temperature 23.0 °C	@Strain 10.9 %, Temperature 73.4 °F	ISO 11403-1 -2
	0.639 GPa	92.6 ksi	
	@Strain 4.90 %, Temperature 80.0 °C	@Strain 4.90 %, Temperature 176 °F	ISO 11403-1 -2
	0.742 GPa	108 ksi	
	@Strain 7.70 %, Temperature 40.0 °C	@Strain 7.70 %, Temperature 104 °F	ISO 11403-1 -2
	0.762 GPa	111 ksi	
	@Strain 12.6 %, Temperature -40.0 °C	@Strain 12.6 %, Temperature -40.0 °F	ISO 11403-1 -2
	0.783 GPa	114 ksi	
	@Strain 10.4 %, Temperature -20.0 °C	@Strain 10.4 %, Temperature -4.00 °F	ISO 11403-1 -2
	0.827 GPa	120 ksi	
	@Strain 1.10 %, Temperature 100 °C	@Strain 1.10 %, Temperature 212 °F	ISO 11403-1 -2
	0.832 GPa	121 ksi	
	@Strain 8.80 %, Temperature 0.000 °C	@Strain 8.80 %, Temperature 32.0 °F	ISO 11403-1 -2
	1.05 GPa	152 ksi	
	@Strain 1.20 %, Temperature 80.0 °C	@Strain 1.20 %, Temperature 176 °F	ISO 11403-1 -2
	1.13 GPa	163 ksi	
	@Strain 5.40 %, Temperature 23.0 °C	@Strain 5.40 %, Temperature 73.4 °F	ISO 11403-1 -2
	1.89 GPa	274 ksi	
	@Strain 1.90 %, Temperature 40.0 °C	@Strain 1.90 %, Temperature 104 °F	ISO 11403-1 -2
	2.28 GPa	330 ksi	

Mechanical Properties

Metric
@Strain 2.20 %,
Temperature 0.000 °C

English
@Strain 2.20 %,
Temperature 32.0 °F

ISO 11403-1 - 2
Comments

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