

Aardvark Polymers AARTEL® 2100UV Acetal Homopolymer Rotational Molding Resin

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

Material Notes:

Aartel 2100UV is a natural acetal homopolymer with UV stabilizers. Aartel 2100UV is a medium viscosity resin with excellent flow characteristics. Aartel 2100UV is available in natural white and may be painted, printed, or plated. Aartel 2100UV may be compounded and dry colored. Aartel 2100UV offers exceptional resistance to aggressive chemicals and fuels. Aartel 2100UV has a fuel permeation rate of 1.2gr-mm/m²-day.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Aardvark-Polymers-AARTEL-2100UV-Acetal-Homopolymer-Rotational-Molding-Resin.php

Physical Properties	Metric	English	Comments
Density	1.42 g/cc	0.0513 lb/in ³	
Water Absorption	0.50 %	0.50 %	24 hour immersion
Moisture Absorption at Equilibrium	0.17 %	0.17 %	50% RH
Water Absorption at Saturation	1.2 %	1.2 %	
Linear Mold Shrinkage, Flow	0.020 cm/cm	0.020 in/in	
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Linear Mold Shrinkage, Transverse	0.019 cm/cm	0.019 in/in	
	@Thickness 2.00 mm	@Thickness 0.0787 in	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	92	92	
Hardness, Rockwell R	120	120	Test 1
	120	120	Test 2
Tensile Strength, Ultimate	67.0 MPa	9720 psi	5 mm/min (0.2 in/min)
Tensile Strength, Yield	67.0 MPa	9720 psi	5 mm/min (0.2 in/min)
	70.0 MPa	10200 psi	
Elongation at Break	30 %	30 %	Nominal
	45 %	45 %	5 mm/min (0.2 in/min)
Elongation at Yield	13 %	13 %	5 mm/min (0.2 in/min)
	17 %	17 %	

Mechanical Properties	Metric	English	Comments
	3.23 GPa	468 ksi	5 mm/min (0.2 in/min)
Flexural Modulus	3.00 GPa	435 ksi	
	3.05 GPa	442 ksi	
Izod Impact, Unnotched	0.800 J/cm	1.50 ft-lb/in	
Izod Impact, Notched (ISO)	8.00 kJ/m ²	3.81 ft-lb/in ²	
	8.00 kJ/m ²	3.81 ft-lb/in ²	
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Charpy Impact Unnotched	26.0 J/cm ²	124 ft-lb/in ²	
	26.0 J/cm ²	124 ft-lb/in ²	
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	0.900 J/cm ²	4.28 ft-lb/in ²	
	0.800 J/cm ²	3.81 ft-lb/in ²	
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Impact	1870	1870	J/m; Unnotched

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	120 Âµm/m-°C	66.7 Âµin/in-°F	
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
	121 Âµm/m-°C	67.2 Âµin/in-°F	
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
CTE, linear, Transverse to Flow	120 Âµm/m-°C	66.7 Âµin/in-°F	
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
	120 Âµm/m-°C	66.7 Âµin/in-°F	
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
Melting Point	178 °C	352 °F	10°C/min
	178 °C	352 °F	

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	168 Â°C	334 Â°F	Unannealed
Deflection Temperature at 1.8 MPa (264 psi)	93.0 Â°C	199 Â°F	
	104 Â°C	219 Â°F	Unannealed
UL RTI, Electrical	50.0 Â°C	122 Â°F	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	50.0 Â°C	122 Â°F	
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical with Impact	50.0 Â°C	122 Â°F	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	50.0 Â°C	122 Â°F	
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical without Impact	50.0 Â°C	122 Â°F	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	50.0 Â°C	122 Â°F	
	@Thickness 3.00 mm	@Thickness 0.118 in	
Flammability, UL94	HB	HB	Test 1
	@Thickness 0.840 mm	@Thickness 0.0331 in	
	HB	HB	Test 2
	@Thickness 0.840 mm	@Thickness 0.0331 in	
	HB	HB	Test 1
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	Test 2
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	Test 1
	@Thickness 3.00 mm	@Thickness 0.118 in	
	HB	HB	Test 2
	@Thickness 3.00 mm	@Thickness 0.118 in	
Oxygen Index	22 %	22 %	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+11 ohm-cm	1.00e+11 ohm-cm	Test 1
	1.00e+14 ohm-cm	1.00e+14 ohm-cm	Test 2
Surface Resistance	6.00e+14 ohm	6.00e+14 ohm	
Dielectric Constant	3.4	3.4	
	3.5	3.5	
	@Frequency 100 Hz	@Frequency 100 Hz	
	3.8	3.8	
Dissipation Factor	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
	0.0060	0.0060	
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
	0.018	0.018	
Comparative Tracking Index	@Frequency 100 Hz	@Frequency 100 Hz	
	600 V	600 V	

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