Delrin® RA511CPE NC010

POM Delrin

Product Texts

Common features of Delrin® acetal resins include mechanical and physical properties such as high mechanical strength and rigidity, excellent fatigue and impact resistance, as well as resistance to moisture, gasoline, lubricants, solvents, and many other neutral chemicals. Delrin® acetal resins also have excellent dimensional stability and good electrical insulating characteristics. They are naturally resilient, self-lubricating, and available in a variety of colors and speciality grades.

Delrin® acetal resin typically is used in demanding applications in the automotive, domestic appliances, sports, industrial engineering, electronics, and consumer goods industries.

Delrin® RA511CPE is a medium viscosity acetal homopolymer with enhanced crystallization for faster cycle times, excellent creep and fatigue resistance, very low VOC emissions, reduced lifecycle greenhouse gas emissions and lower fossil resource use. Delrin ® RA511CPE provides improved thermal stability, excellent dimensional stability, low warpage, fewer voids, and improved productivity for injection molding.

Delrin® Renewable Attributed base polymer is produced from 100% bio-feedstock from waste*. 100% certified renewable electricity is used for its production.
This approach helps customers in achieving their sustainability goals.

* according to ISCC Plus mass balance certification.

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
[C] Melt volume-flow rate, MVR	**13**	cm³/10min	ISO 1133
Temperature	**190**	°C	-
Load	**2.16**	kg	-
[C] Molding shrinkage, parallel	**1.8**	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**1.8**	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**3500**	MPa	ISO 527
[C] Yield stress	**75**	MPa	ISO 527
[C] Yield strain	**13**	%	ISO 527
[C] Nominal strain at break	**25**	%	ISO 527
[C] Charpy impact strength, +23°C	**235**	kJ/m²	ISO 179/1eU
[C] Charpy notched impact strength, +23°C	**7**	kJ/m²	ISO 179/1eA
[C] Charpy notched impact strength, -30°C	**6.5**	kJ/m²	ISO 179/1eA

[C]: CAMPUS

Thermal properties	Value	Unit	Test Standard
ISO Data			
[C] Melting temperature, 10°C/min	**178**	°C	ISO 11357-1/-3
[C] Temp. of deflection under load, 1.80 MPa	**115**	°C	ISO 75-1/-2
[C] Temp. of deflection under load, 0.45 MPa	**165**	°C	ISO 75-1/-2
[C] Coeff. of linear therm. expansion, parallel	**95**	E-6/K	ISO 11359-1/-2
[C] Coeff. of linear therm. expansion, normal	**95**	E-6/K	ISO 11359-1/-2
[C] Burning Behav. at 1.5 mm nom. thickn.	**HB**	class	IEC 60695-11-10
Thickness tested	**1.5**	mm	-
Yellow Card available	**yes**	-	-
[C] Burning Behav. at thickness h	**HB**	class	IEC 60695-11-10
Thickness tested	**0.8**	mm	-
Yellow Card available	**yes**	-	-

[C]: CAMPUS

Electrical properties	Value	Unit	Test Standard
ISO Data			
[C] Relative permittivity, 100Hz	**3.9**	-	IEC 62631-2-1
[C] Relative permittivity, 1MHz	**3.9**	-	IEC 62631-2-1
[C] Dissipation factor, 100Hz	**40**	E-4	IEC 62631-2-1
[C] Dissipation factor, 1MHz	**45**	E-4	IEC 62631-2-1
[C] Volume resistivity	**>1E13**	Ohm*m	IEC 62631-3-1

[C] Surface resistivity	**>1E15**	Ohm	IEC 62631-3-2
[C] Comparative tracking index	**600**	-	IEC 60112

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
[C] Density	**1420**	kg/m³	ISO 1183

[C]: CAMPUS

Characteristics

Processing
Injection Molding, Profile Extrusion, Sheet Extrusion, Other Extrusion

Delivery form
Pellets, Natural Color

Additives
Release agent

Features
Creep Resistance, Fatigue Resistance, Low Emission, Low Warpage, Thermal Stability, Homopolymer

Certifications
Contains renewable resources, ISCC Plus

Regional Availability
North America, Europe, Asia Pacific, South and Central America, Near East/Africa

Other text information

Injection molding
Drying is recommended, but not necessary for newly opened packaging stored in a dry location.
Follow the drying guidelines above in the following cases:
· If moisture is above the Processing Moisture Content recommendation,
· When a resin container is damaged,
· When the material is not properly stored in a dry place at room temperature
or
· When packaging stays open for a significant time.