

DuPont™ Delrin® 100STE NC010

ACETAL RESIN

Product Information

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® 100STE is a super-toughened, high viscosity acetal homopolymer with very low VOC emissions for applications in automotive interiors. Processing methods include injection molding.

General information	Value	Unit	Test Standard	
Resin Identification	POM-HI	-	ISO 1043	
Part Marking Code	POM-HI	-	ISO 11469	
Rheological properties	Value	Unit	Test Standard	
Melt volume-flow rate	2	cm ³ /10min	ISO 1133	
Temperature	190	°C	ISO 1133	
Load	2.16	kg	ISO 1133	
Melt mass-flow rate	2.3	g/10min	ISO 1133	
Molding shrinkage, parallel	0.8	%	ISO 294-4, 2577	DS
Molding shrinkage, normal	1.1	%	ISO 294-4, 2577	DS
DS: Derived from similar grade				
Mechanical properties	Value	Unit	Test Standard	
Tensile Modulus	1300	MPa	ISO 527-1/-2	
Yield stress	43	MPa	ISO 527-1/-2	
Yield strain	35	%	ISO 527-1/-2	
Nominal strain at break	>50	%	ISO 527-1/-2	
Flexural Modulus	1250	MPa	ISO 178	
Flexural Stress at 3.5%	35	MPa	ISO 178	
Charpy impact strength			ISO 179/1eU	
73°F	N	kJ/m ²		
-22°F	N	kJ/m ²		
Charpy notched impact strength			ISO 179/1eA	
73°F	90	kJ/m ²		
-22°F	17	kJ/m ²		
Hardness, Rockwell, M-scale	18.7	-	ISO 2039-2	
Hardness, Rockwell, R-scale	102	-	ISO 2039-2	
Thermal properties	Value	Unit	Test Standard	
Melting temperature, 18°F/min	178	°C	ISO 11357-1/-3	
Temp. of deflection under load			ISO 75-1/-2	
260 psi	64	°C		
65 psi	111	°C		
Vicat softening temperature, 90°F, 2 lbf	170	°C	ISO 306	
Coeff. of linear therm. expansion, parallel	120	E-6/K	ISO 11359-1/-2	
Coeff. of linear therm. expansion, normal	130	E-6/K	ISO 11359-1/-2	
Flammability	Value	Unit	Test Standard	
FMVSS Class	B	-	ISO 3795 (FMVSS 302)	
Burning rate, Thickness 1 mm	42	mm/min	ISO 3795 (FMVSS 302)	
Other properties	Value	Unit	Test Standard	
Density	1330	kg/m ³	ISO 1183	
Density of melt	1140	kg/m ³	-	
VDA Properties	Value	Unit	Test Standard	
Emissions	<2	mg/kg	VDA 275	
Injection	Value	Unit	Test Standard	
Drying Recommended	yes	-	-	
Drying Temperature	80	°C	-	

To find out more, visit [DuPont Performance Polymers](#) or contact nearest DuPont location.

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Europe/Middle East/Africa

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Drying Time, Dehumidified Dryer	2 - 4	h	-
Processing Moisture Content	≤0.05	%	-
Melt Temperature Optimum	205	°C	-
Min. melt temperature	200	°C	-
Max. melt temperature	210	°C	-
Mold Temperature Optimum	50	°C	-
Min. mold temperature	40	°C	-
Max. mold temperature	60	°C	-
Hold pressure range	60 - 80	MPa	-
Hold pressure time	7.5	s/mm	-
Annealing time, optional	30	min/mm	-
Annealing temperature	160	°C	-

Extrusion	Value	Unit	Test Standard
Drying Temperature	75 - 85	°C	-
Drying Time, Dehumidified Dryer	2 - 4	h	-
Processing Moisture Content	≤0.05	%	-
Melt Temperature Optimum	200	°C	-
Melt Temperature Range	195 - 205	°C	-

Characteristics

Processing	<ul style="list-style-type: none">• Injection Molding• Profile Extrusion	<ul style="list-style-type: none">• Sheet Extrusion• Other Extrusion
Delivery form	<ul style="list-style-type: none">• Pellets	
Additives	<ul style="list-style-type: none">• Lubricants	<ul style="list-style-type: none">• Release agent
Regional Availability	<ul style="list-style-type: none">• North America• Europe	<ul style="list-style-type: none">• Asia Pacific• South and Central America• Near East/Africa• Global

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc. ISO Mechanical properties measured at 160 mil (Hytrel® measured at 80 mil), IEC Electrical properties measured at 80 mil, all ASTM properties measured at 120 mil, and test temperatures are 73°F unless otherwise stated.

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