

Zytel® SC310 NC010

NYLON RESIN

Product Description

Zytel® SC310 NC010 is a lubricated polyamide 66 resin for injection molding. It has been developed for consideration into applications such as parts for the healthcare industry.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• Lubricant		
Features	• Fast Molding Cycle • Fatigue Resistant • Fuel Resistant • Good Chemical Resistance • Good Electrical Properties	• Good Mold Release • Good Moldability • Good Processability • Good Wear Resistance • Grease Resistant	• High Flow • Low Molecular Weight • Lubricated • Oil Resistant
Uses	• Medical/Healthcare Applications		
RoHS Compliance	• Contact Manufacturer		
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		
Part Marking Code (ISO 11469)	• >PA66<		
Resin ID (ISO 1043)	• PA66		
Product Category	• Special Control Resins	• Unreinforced Resins	

Physical	Dry	Conditioned	Unit	Test Method
Density	1.14	--	g/cm ³	ISO 1183
Molding Shrinkage				
Flow : 3.20 mm	1.5	--	%	Internal Method
Across Flow : 2.00 mm	1.4	--	%	ISO 294-4
Flow : 2.00 mm	1.4	--	%	ISO 294-4
Water Absorption				ISO 62
Saturation, 23°C	8.5	--	%	
Equilibrium, 23°C, 50% RH	2.6	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	3100	1400	MPa	ISO 527-2
Tensile Stress (Yield, 23°C)	82.0	55.0	MPa	ISO 527-2
Tensile Strain				
Yield, 23°C	4.5	25	%	ISO 527-2
Break, 23°C	45	--	%	ISO 527-2/50
Nominal Tensile Strain at Break (23°C)	25	> 100	%	ISO 527-2
Tensile Creep Modulus				ISO 899-1
1 hr	--	1400	MPa	
1000 hr	--	820	MPa	
Flexural Modulus (23°C)	2800	1200	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	4.5	3.0	kJ/m ²	
23°C	5.5	15	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	400 kJ/m ²	No Break		
23°C	No Break	No Break		

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To find out more, visit **DuPont Performance Polymers** or contact the nearest DuPont location.

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Hardness	Dry	Conditioned	Unit	Test Method
Rockwell Hardness				ISO 2039-2
M-Scale	79	59		
R-Scale	121	108		
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	200	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	70.0	--	°C	ISO 75-2/A
Melting Temperature ²	262	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C	0.00010	--	cm/cm/°C	
Transverse : 23 to 55°C	0.00011	--	cm/cm/°C	
Injection	Dry Unit			
Drying Temperature	80.0 °C			
Drying Time	2.0 to 4.0 hr			
Suggested Max Moisture	< 0.20 %			
Processing (Melt) Temp	280 to 300 °C			
Melt Temperature, Optimum	290 °C			
Mold Temperature	50.0 to 90.0 °C			
Mold Temperature, Optimum	70 °C			

Notes

¹ Typical properties: these are not to be construed as specifications.

² 10°C/min

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc.

ISO Mechanical properties measured at 4.0mm, ISO Electrical properties measured at 2.0mm, and all ASTM properties measured at 3.2mm.

Test temperatures are 23°C unless otherwise stated.

The above data sheet is a condensed version. For a complete data sheet, please contact your DuPont representative.

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