

Zytel® FGFE5171 WT411

NYLON RESIN

Common features of Zytel® nylon resin include mechanical and physical properties such as high mechanical strength, excellent balance of stiffness and toughness, good high temperature performance, good electrical and flammability properties, good abrasion and chemical resistance. In addition, Zytel® nylon resins are available in different modified and reinforced grades to create a wide range of products with tailored properties for specific processes and end-uses. Zytel® nylon resin, including most flame retardant grades, offer the ability to be coloured.

The good melt stability of Zytel® nylon resin normally enables the recycling of properly handled production waste. If recycling is not possible, we recommend, as the preferred option, incineration with energy recovery (-31kJ/g of base polymer) in appropriately equipped installations. For disposal, local regulations have to be observed.

Zytel® nylon resin typically is used in demanding applications in the automotive, furniture, domestic appliances, sporting goods and construction industry.

Zytel® FGFE5171 WT411 is a 33% glass filled nylon 66 resin, white color.

FOOD CONTACT

This product is manufactured according to Good Manufacturing Practice (GMP) principles and generally accepted in food contact applications for EMEA. For details, individual compliance statements are available from our representative.

Rheological properties

	dry/cond.		
Viscosity number	130 ^[1] /*	cm ³ /g	ISO 307, 1628
Melt viscosity, @ 1000 sec-1, 280 °C	190/*	Pa.s	ISO 11443
[1]: in formic acid 90%			

Typical mechanical properties

	dry/cond.		
Tensile modulus	10000/-	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	150/-	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.5/-	%	ISO 527-1/-2
Charpy impact strength, 23 °C	40/-	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23 °C	4.5/-	kJ/m ²	ISO 179/1eA
Poisson's ratio	0.34/-		

Thermal properties

	dry/cond.		
Melting temperature, 10 °C/min	262/*	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	246/*	°C	ISO 75-1/-2

Physical/Other properties

	dry/cond.		
Density	1410/-	kg/m ³	ISO 1183

Injection

Drying Recommended	yes
Drying Temperature	80 °C
Drying Time, Dehumidified Dryer	2 - 4 h
Processing Moisture Content	≤0.2 %
Melt Temperature Optimum	295 °C
Min. melt temperature	285 °C
Max. melt temperature	305 °C
Screw tangential speed	≤0.2 m/s

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Mold Temperature Optimum	100 °C
Min. mould temperature	70 °C
Max. mould temperature	120 °C
Hold pressure range	50 - 100 MPa
Hold pressure time	3 s/mm
Ejection temperature	210 °C

Characteristics

Processing	Injection Moulding
Delivery form	Pellets