Celanese
The chemistry inside innovation™

CELSTRAN® PA66-GF50-20 AD3007

PA66 with 50% ash content - high gloss, high impact modified
Material code according to ISO 1043-1: PA66

Heat stabilized Nylon 66 reinforced by 50 weight percent long glass fibers. The pellets are cylindrical and normally as well as the embedded fibers 11 mm long.

Parts molded of CELSTRAN have outstanding mechanical properties such as high strength and stiffness combined with high heat deflection. The notched impact strength is increased at elevated and low temperatures due to the fiber skeleton built in the parts. The long fiber reinforcement reduces creep significantly.

The very isotropic shrinkage in the molded parts minimizes the warpage.

Complex parts can be manufactured with high reproducibility by injection molding.

Can be used for substituting die cast metal with the advantage of Weight reduction, no corrosion problems, no post treatment.

Rheological properties

Viscosity number	132	cm^3/g	ISO 307, 1157, 1628

Typical mechanical properties

	dry/cond.		
Tensile Modulus	16400 / 12000	MPa	ISO 527-1/-2
Stress at break, 5mm/min	265 / 185	MPa	ISO 527-1/-2
Strain at break, 5mm/min	2.05 / 2.1	%	ISO 527-1/-2
Flexural Modulus	14400 / 11500	MPa	ISO 178
Flexural Strength	430 / 290	MPa	ISO 178
Charpy impact strength, 23°C	87 / 85	kJ/m^2	ISO 179/1eU
Charpy impact strength, -30°C	78 / 62	kJ/m^2	ISO 179/1eU
Charpy notched impact strength, 23°C	52 / 38	kJ/m^2	ISO 179/1eA
Charpy notched impact strength, -30°C	45 / 42	kJ/m^2	ISO 179/1eA

Thermal properties

Melting temperature, 10°C/min	260	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	255	°C	ISO 75-1/-2
Temp. of deflection under load, 8 MPa	235	°C	ISO 75-1/-2

Other properties

Density	1560	kg/m^3	ISO 1183

Injection

Drying Temperature	70 - 80	°C
Drying Time, Dehumidified Dryer	2 - 4	h
Processing Moisture Content	0.15	%
Screw tangential speed	0.1	m/s
Max. mould temperature	90 - 120	°C
Back pressure	3	MPa
Injection speed	medium	

Printed: 2023-09-18