Celanese
The chemistry inside innovation™

CELSTRAN® +PP-GF40-04CN15

Polypropylene with 40% ash content
Material code according to ISO 1043-1: PP Polypropylene with 40 weight percent ash content, long glass fibers reinforced, Natural. The fibers are chemically coupled to the polypropylene matrix. The pellets are cylindrical and normally as well as the embedded fibers 10 mm long. Concentrate for blending down on a fiber content of 20-30% 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. Application field: Functional/structural parts for automotive

Typical mechanical properties

Tensile Modulus	9300	MPa	ISO 527-1/-2
Stress at break, 5mm/min	135	MPa	ISO 527-1/-2
Strain at break, 5mm/min	2	%	ISO 527-1/-2
Flexural Modulus	9200	MPa	ISO 178
Flexural Strength	205	MPa	ISO 178
Charpy impact strength, 23°C	50	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	50	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	32	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	36	kJ/m²	ISO 179/1eA

Thermal properties

Melting temperature, 10°C/min	165	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	158	°C	ISO 75-1/-2
Temp. of deflection under load, 8 MPa	138	°C	ISO 75-1/-2

Other properties

Density	1210	kg/m³	ISO 1183

Injection

Drying Temperature	90 - 100	°C
Drying Time, Dehumidified Dryer	2	h
Processing Moisture Content	0.2	%
Screw tangential speed	0.1	m/s
Max. mould temperature	30 - 70	°C
Back pressure	3	MPa
Injection speed	slow	