

Material code according to ISO 1043-1: PP

Polypropylene reinforced with 30 weight percent long

glass fibers. UV-stabilized. The fibers are chemically coupled to the polypropylene

matrix. The pellets are cylindrical and normally as well as the embedded fibers 10 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.

Application field: Functional/structural parts for automotive

Physical properties	Value	Unit	Test Standard
Density	1130	kg/m³	ISO 1183
Mechanical properties	Value	Unit	Test Standard
Tensile modulus (1mm/min)	7000	MPa	ISO 527-2/1A
Tensile modulus (80°C)	4600	MPa	ISO 527-2/1A
Tensile strength (80°C)	55	MPa	ISO 527-2/1A
Tensile stress at break (5mm/min)	100	MPa	ISO 527-2/1A
Tensile strain at break (5mm/min)	2.3	%	ISO 527-2/1A
Elongation at break (80°C)	2.6	%	ISO 527-2/1A
Flexural modulus (23°C)	7800	MPa	ISO 178
Flexural modulus (80°C)	4600	MPa	ISO 178
Flexural strength (23°C)	160	MPa	ISO 178
Flexural strength (80°C)	85	MPa	ISO 178
Charpy impact strength @ 23°C	54.0	kJ/m²	ISO 179/1eU
Charpy impact strength @ -30°C	42.0	kJ/m²	ISO 179/1eU
Charpy notched impact strength @ 23°C	14.0	kJ/m²	ISO 179/1eA
Charpy notched impact strength @ -30°C	15.0	kJ/m²	ISO 179/1eA
Unnotched impact str (Izod) @ 23°C	38	kJ/m²	ISO 180/1U
Unnotched impact str (Izod) @ -30°C	30	kJ/m²	ISO 180/1U
Thermal properties	Value	Unit	Test Standard
Melting temperature (10°C/min)	166	°C	ISO 11357-1,-2,-3
DTUL @ 1.8 MPa	155	°C	ISO 75-1/-2
DTUL @ 8.0 MPa	122	°C	ISO 75-1/-2