

RENYCLE S GF3003K 3033 BK

DESCRIPTION

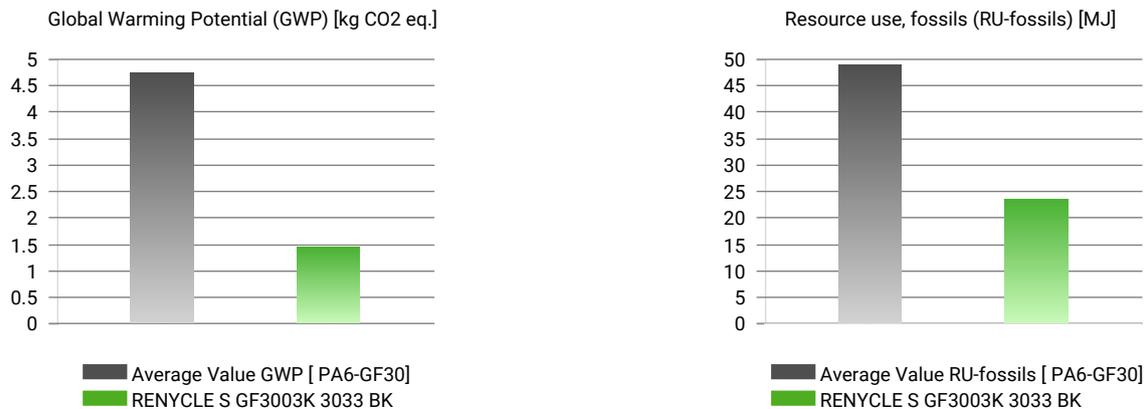
Partially recycled PA6, 30% glass-fibre-reinforced injection moulding grade. Heat stabilized. Black colour.

The recycled material has been developed to reduce its environmental impact in comparison to traditional virgin options. Suitable for parts requiring high stiffness and good mechanical resistance.

ISO 1043: PA6-GF30

REGIONAL AVAILABILITY: Europe

ENVIRONMENTAL PERFORMANCE



The environmental performance metrics GWP and RU-fossils are defined per kg of material produced and are up to date as of the release date of the Technical Data Sheet.

MATERIAL HANDLING AND PROCESSING

The material is delivered in moisture-proof packaging ready for processing. Maximum recommended water content for best processing is 0.15%. Typical conditions with a desiccant drier: temperature 80 °C, dew point -20 °C or below, time 2-4 h or more. Special care must be taken to avoid moisture absorption and contamination with other polymers when adding regrind material. Colour variation and mechanical properties reduction may occur and should always be carefully monitored.

Injection Molding Processing Parameters

Melt Temperature
240 - 280°C

Mold Temperature
80 - 90°C

Injection Speed
medium-high

PRODUCT SAFETY AND APPROVALS

For safety instruction please refer to Material Safety Data Sheet
ROHS compliant 2011/65/EU and following amendments



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PROPERTY	STANDARD	UNIT	VALUE	
			DAM*	Cond**
PHYSICAL PROPERTIES				
Density	ISO 1183	kg/m ³	1370	
Melt Volume-Flow Rate	275/5 ^[1] ISO 1133	cm ³ /10min	50	
Melt Flow Rate	250/5 ^[2] ISO 1133	g/10min	31	
Moulding shrinkage - Parallel / Normal	280/90/60 ^[3] ISO 294-4	%	0.3 / 0.8	
Water Absorption, immersion at 23°C	2mm ISO 62	%	7	
Moisture Absorption 23°C - 50%RH	2mm ISO 62	%	2	
Viscosity Index (Sulfuric Acid)	ISO 307	ml/g	126	
MECHANICAL PROPERTIES				
Tensile Modulus	1mm/min ISO 527-2/1A	MPa	9500	5700
Stress at Break	5mm/min ISO 527-2/1A	MPa	150	85
Strain at Break	5mm/min ISO 527-2/1A	%	2.8	8
Flexural Modulus	2mm/min ISO 178	MPa	8700	4100
Flexural Strength	2mm/min ISO 178	MPa	225	120
Charpy Impact Strength	+23°C ISO 179/1eU	kJ/m ²	60	75
Charpy Impact Strength	-30°C ISO 179/1eU	kJ/m ²	50	
Charpy Notched Impact Strength	+23°C ISO 179/1eA	kJ/m ²	8	15
Charpy Notched Impact Strength	-30°C ISO 179/1eA	kJ/m ²	6.5	
THERMAL PROPERTIES				
Melting Temperature	10°C/min ISO 11357-1/-3	°C	219	
Heat Deflection Temperature	1.80 MPa ISO 75/2Af	°C	195	
Heat Deflection Temperature	0.45 MPa ISO 75/2Bf	°C	215	
FLAMMABILITY PROPERTIES				
Flammability	0.8mm UL 94	class		HB
Automotive Interior Flammability	3mm ISO 3795	mm/min		0
ELECTRICAL PROPERTIES				
Volume Resistivity	500V IEC 62631-3-1	Ohm*m	1E13	1E11
Surface Resistivity	500V IEC 62631-3-2	Ohm	1E12	1E10

*: DAM = Dry As Moulded state according to ISO 16396-2, **: Cond = Conditioned state similar to ISO 1110

1: Temperature [°C] / Load [kg]

2: Temperature [°C] / Load [kg]

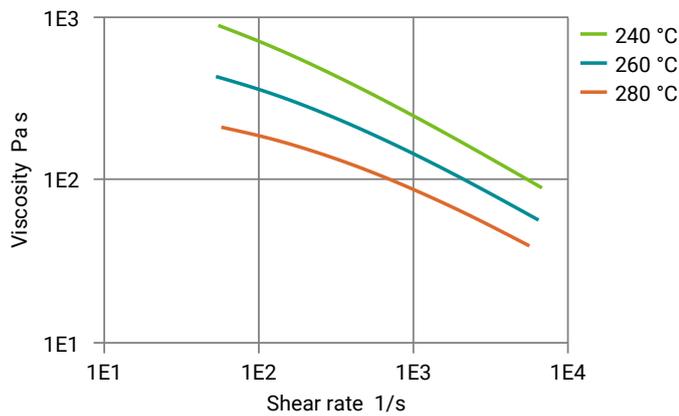
3: Melt Temperature [°C] / Mold Temperature [°C] / Cavity Pressure [MPa]



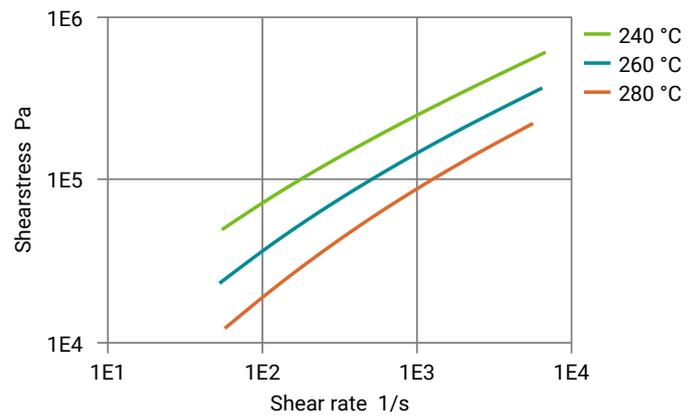
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DIAGRAMS

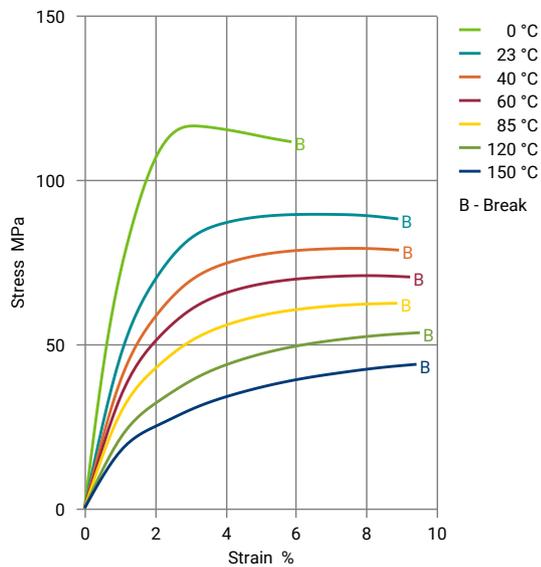
Viscosity-shear rate



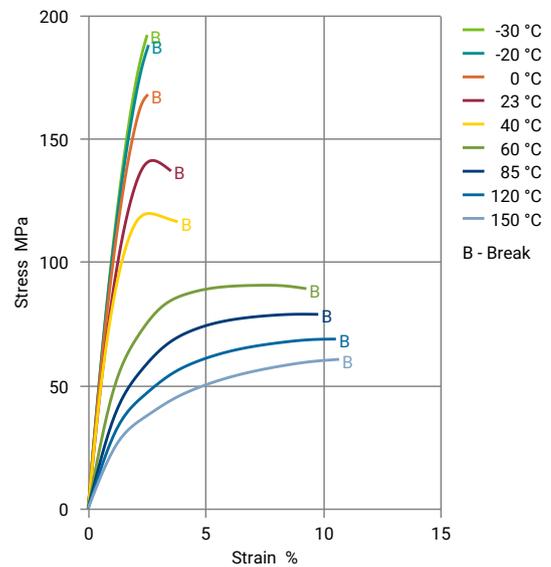
Shearstress-shear rate



Stress-strain (cond.)

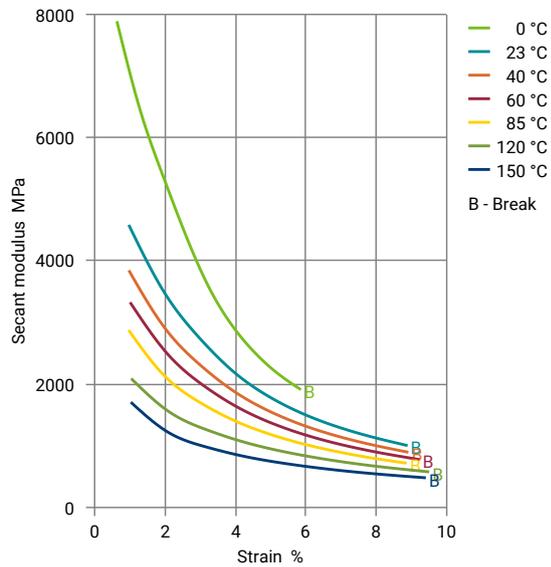


Stress-strain (dry)

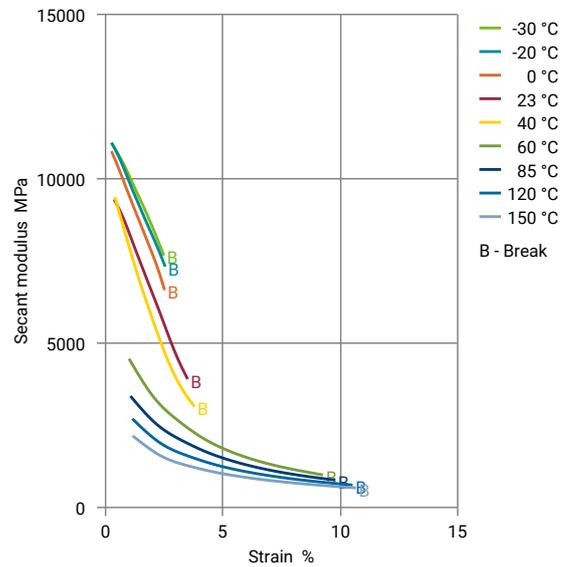


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Secant modulus-strain (cond.)



Secant modulus-strain (dry)



Specific volume-temperature (pvT)

