RENYCLE S GF3004K 3033 BK

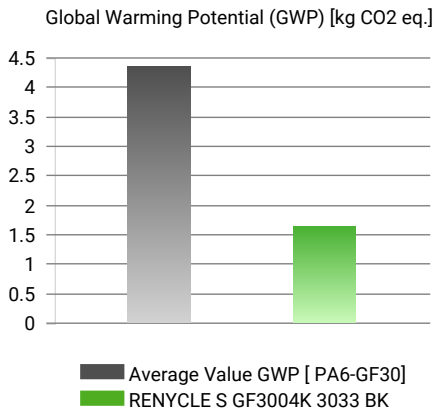
DESCRIPTION

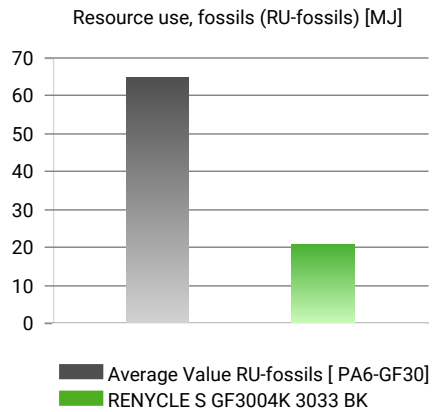
Recycled PA6, 30% glass-fibre injection moulding grade. Heat stabilized. Black colour.

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, Asia Pacific

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. Avoid excessive shear rates and high thermal stresses for better processing. 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	Mold Temperature	Injection Speed
240 - 280°C	80 - 90°C	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*	VALUE Cond**
PHYSICAL PROPERTIES					
Density		ISO 1183	kg/m³	1360	
Melt Volume-Flow Rate	275/5 [1]	ISO 1133	cm³/10min	40	
Melt Flow Rate	275/5 [2]	ISO 1133	g/10min	65	
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	135	
MECHANICAL PROPERTIES					
Tensile Modulus	1mm/min	ISO 527-2/1A	MPa	9300	5400
Stress at Break	5mm/min	ISO 527-2/1A	MPa	140	85
Strain at Break	5mm/min	ISO 527-2/1A	%	2.9	3.6
Flexural Modulus	2mm/min	ISO 178	MPa	8400	4700
Flexural Strength	2mm/min	ISO 178	MPa	220	135
Charpy Impact Strength	+23°C	ISO 179/1eU	kJ/m²	58	70
Charpy Impact Strength	-30°C	ISO 179/1eU	kJ/m²	47	
Charpy Notched Impact Strength	+23°C	ISO 179/1eA	kJ/m²	7.5	12
Charpy Notched Impact Strength	-30°C	ISO 179/1eA	kJ/m²	5.5	
THERMAL PROPERTIES					
Melting Temperature	10°C/min	ISO 11357-1/-3	°C	220	
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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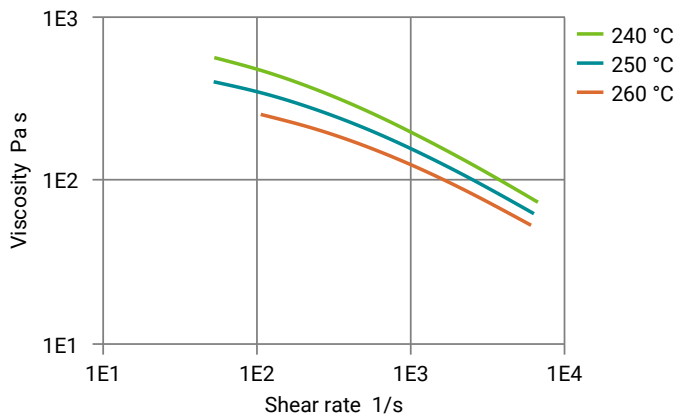
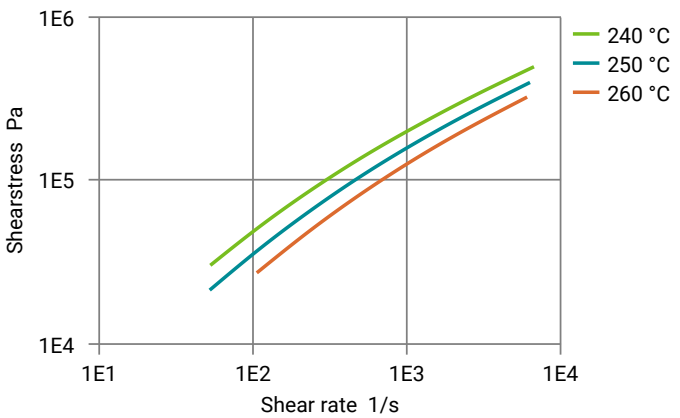
DIAGRAMS

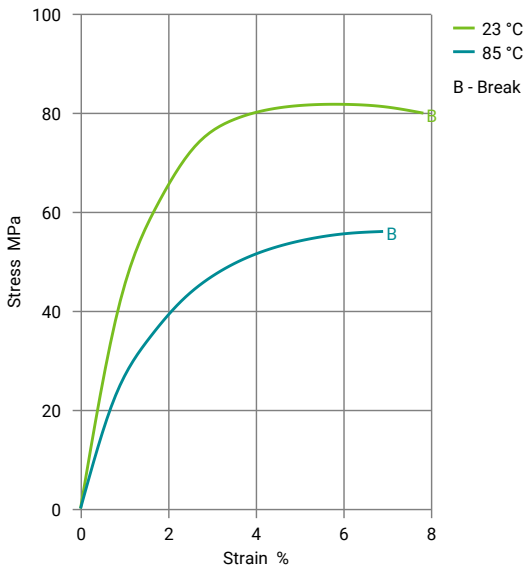
Viscosity-shear rate



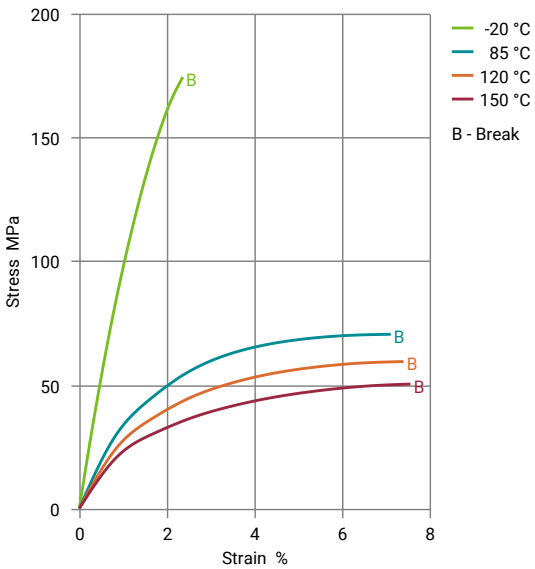
Shearstress-shear rate



Stress-strain (cond.)



Stress-strain (dry)



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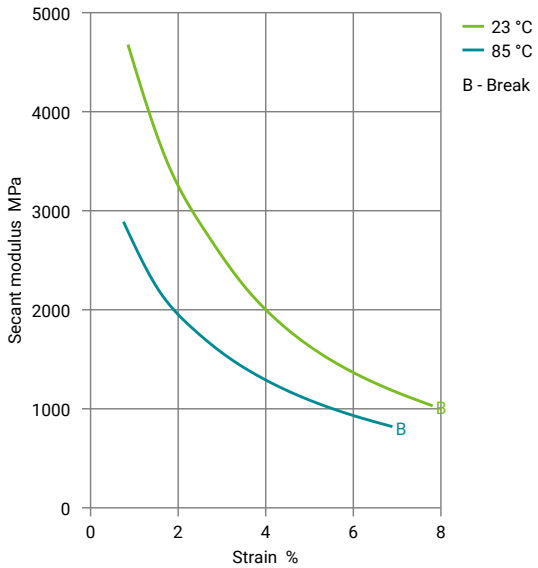
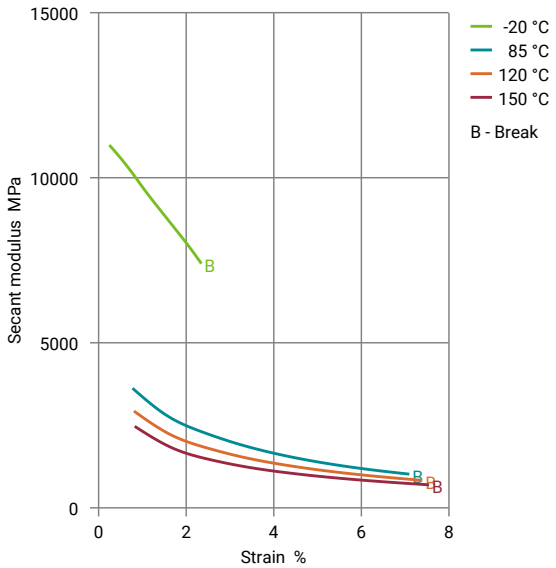
Secant modulus-strain (cond.)



Secant modulus-strain (dry)



Specific volume-temperature (pvT)