

# RENYCLE S GF2501 HF0 3033 BK

PROVISIONAL

## DESCRIPTION

Partially recycled PA6, flame retardant injection moulding grade, halogen and red phosphorus free. 25% glass-fibre-reinforced. Laser markable. Black colour.

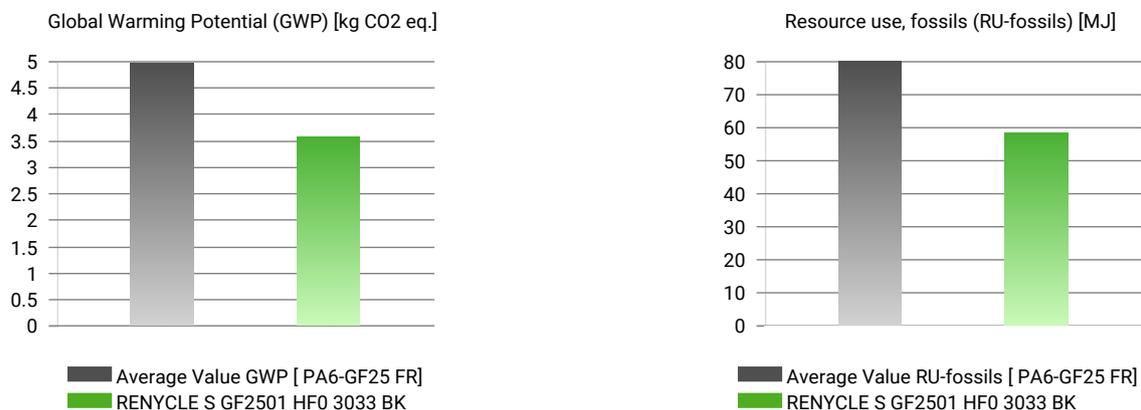
The recycled material has been developed to reduce its environmental impact in comparison to traditional virgin options. Suitable for parts requiring fire retardancy along with medium stiffness and enhanced mechanical resistance. Tested V-0 at 0.8 mm according to UL-94.  
ISO 1043: PA6-GF25 FR(40)

REGIONAL AVAILABILITY: Europe

*THE CHARACTERISTICS SHOWN HERE ARE PROVISIONAL AND REFLECT THE AVERAGE VALUES OF PROPERTIES MEASURED OVER A LIMITED NUMBER OF PRODUCTION CAMPAIGNS*

Formerly Known As LX21210

## 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 0.10%. 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  
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  
Underwriters Laboratories Inc. certified material [www.ul.com](http://www.ul.com)  
ROHS compliant 2011/65/EU and following amendments



# RENYCLE S GF2501 HF0 3033 BK

PROPERTY	STANDARD	UNIT	VALUE	
			DAM*	Cond**
<b>PHYSICAL PROPERTIES</b>				
Density		kg/m <sup>3</sup>	1380	
Moulding shrinkage - Parallel / Normal	270/80/60 <sup>[1]</sup>	ISO 1183 ISO 294-4	%	0.4 / 0.6
Water Absorption, immersion at 23°C	2mm	ISO 62	%	5
Moisture Absorption 23°C - 50%RH	2mm	ISO 62	%	1.7
<b>MECHANICAL PROPERTIES</b>				
Tensile Modulus	1mm/min	ISO 527-2/1A	MPa	9400
Stress at Break	5mm/min	ISO 527-2/1A	MPa	120
Strain at Break	5mm/min	ISO 527-2/1A	%	2.6
Flexural Modulus	2mm/min	ISO 178	MPa	9200
Flexural Strength	2mm/min	ISO 178	MPa	190
Charpy Impact Strength	+23°C	ISO 179/1eU	kJ/m <sup>2</sup>	50
Charpy Notched Impact Strength	+23°C	ISO 179/1eA	kJ/m <sup>2</sup>	7
<b>THERMAL PROPERTIES</b>				
Melting Temperature	10°C/min	ISO 11357-1/-3	°C	217
Heat Deflection Temperature	1.80 MPa	ISO 75/2Af	°C	195
Vicat Softening Temperature	50°C/h 50N	ISO 306	°C	210
<b>FLAMMABILITY PROPERTIES</b>				
Flammability	0.8mm	UL 94	class	V-0
Flammability	0.4mm	UL 94	class	V-0
Glow Wire Flammability Index	1mm	IEC 60695-2-12	°C	960
Glow Wire Flammability Index	2mm	IEC 60695-2-12	°C	960
Glow Wire Ignition Temperature	1mm	IEC 60695-2-13	°C	750
Glow Wire Ignition Temperature	2mm	IEC 60695-2-13	°C	750
Automotive Interior Flammability	3mm	ISO 3795	mm/min	0
<b>ELECTRICAL PROPERTIES</b>				
Volume Resistivity	500V	IEC 62631-3-1	Ohm*m	1E13
Surface Resistivity	500V	IEC 62631-3-2	Ohm	1E12
Comparative Tracking Index	SoI.A	IEC 60112	V	500

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

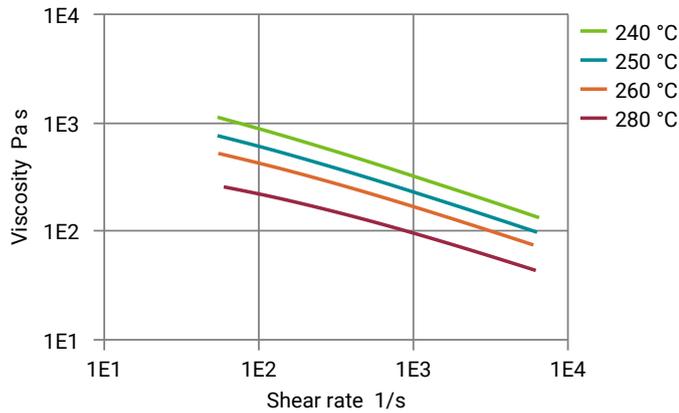
1: Melt Temperature [°C] / Mold Temperature [°C] / Cavity Pressure [MPa]



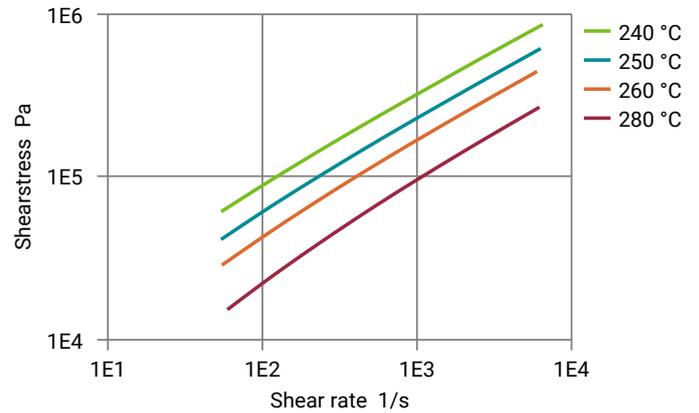
# RENYCLE S GF2501 HF0 3033 BK

## DIAGRAMS

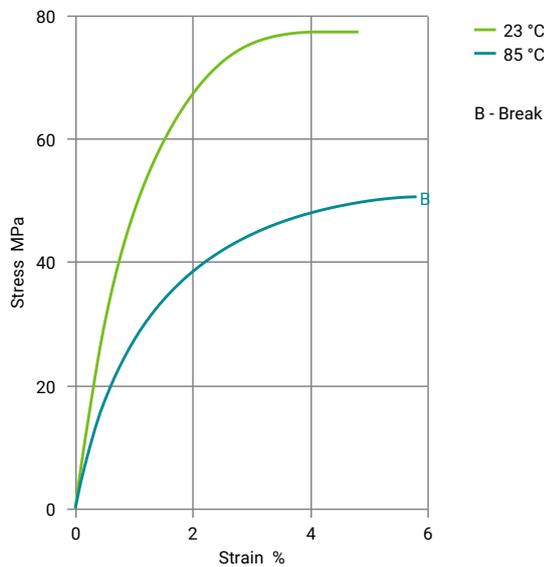
### Viscosity-shear rate



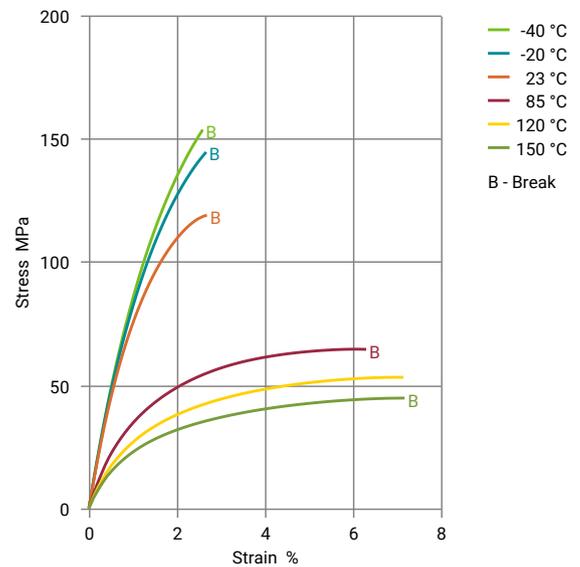
### Shearstress-shear rate



### Stress-strain (cond.)

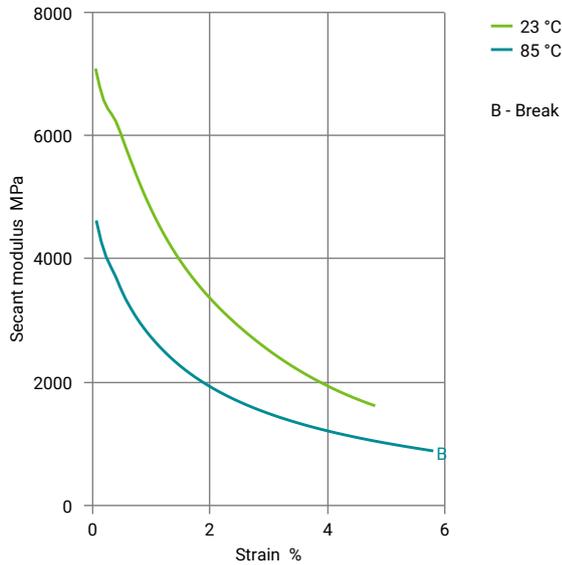


### Stress-strain (dry)

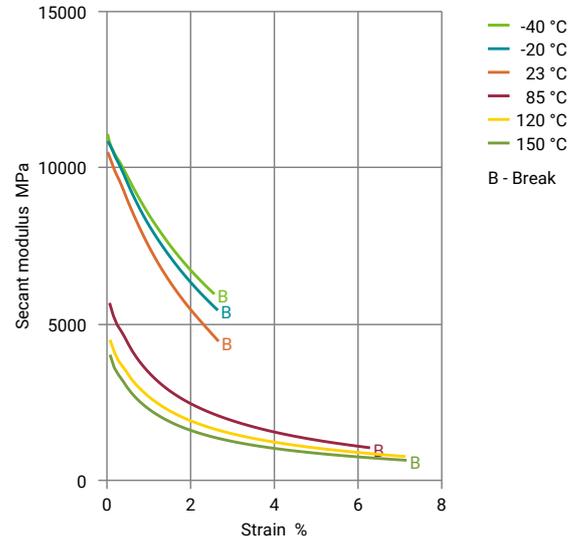


# RENYCLE S GF2501 HF0 3033 BK

Secant modulus-strain (cond.)



Secant modulus-strain (dry)



Specific volume-temperature (pvT)

