



## B1-G40-12

### Prime Nylon 6, 40% Glass Fibre Reinforced Compound.

Beetle B1-G40-12 offers a combination of good mechanical properties and also mould release performance. It also contains heat stabilisation to extend component life in demanding environments.

#### General Properties

Polymer Type	PA6
Filler / Reinforcement	Glass Fibre Reinforced
Processing Method	Injection Moulding
Form	Uniform Granules

Physical Properties	Test Method	Unit	D-A-M
Density	ISO 1183	g/cm <sup>3</sup>	1.45
Water absorption (humidity)	ISO 62	%	1.7

Mechanical Properties	Test Method	Unit	D-A-M	Conditioned
Tensile Modulus	ISO 527-2	MPa	12000	8000
Tensile Stress @ Break	ISO 527-2	MPa	200	135
Tensile Strain @ Break	ISO 527-2	%	2.5	5
Flexural Modulus	ISO 178	MPa	10200	6000
Flexural Strength	ISO 178	MPa	265	140
Charpy Notched Impact	ISO 179/1-eA	kJ/m <sup>2</sup>	15	
Charpy Unnotched Impact	ISO 179/1-eU	kJ/m <sup>2</sup>	>60	
Izod Notched Impact	ISO 180/A	kJ/m <sup>2</sup>	14	

Thermal Properties	Test Method	Unit	D-A-M
Heat Distortion Temperature @ 0.45MPa	ISO75-2	°C	> 200
Heat Distortion Temperature @ 1.8MPa	ISO75-2	°C	> 200

Flammability Properties	Test Method	Unit	D-A-M
Flame Rating (This grade is not UL listed)	Internal test (UL94)	*	HB (1.5mm)
Oxygen Index	ISO 4589-2	%	22

Electrical Properties	Test Method	Unit	D-A-M	Conditioned
Surface Resistivity	IEC 60093	ohms	1.00E+14	1.00E+11
Volume Resistivity	IEC 60093	ohms.cm	1.00E+16	1.00E+14
Electric Strength (3mm)	IEC 60243-1	kV/mm	11	8
Relative Permittivity	IEC 60250		3.8	4.2
Comparative Tracking Index	IEC 60112	V	500	

Recommended Processing	Unit
Drying Temperature	°C
Drying Time	Hours
Processing Temperatures (Barrel)	°C
Melt temperature range	°C
Mould Temperature	°C

The material is supplied predried. Additional drying will be necessary if the material is open to the air for more than 2 to 3 hours. Redrying is also recommended after prolonged storage in undisturbed original packaging. The appearance of splash marks on the surface of mouldings indicates excessive moisture is present. Excessive drying temperature or duration will lead to progressive yellowing of natural or light colours.

#### Packaging and Storage

25Kg Moisture proof Aluminium sacks (Standard packaging). May be supplied in Octabins, Big bags, Bulk Silo etc, on request.  
Store in dry, well ventilated areas away from heat sources.

The information given in this document is accurate to our knowledge on date of publication.  
All data provided is based on typically achieved values and not to be taken as specifications.  
Values will differ with addition of additives, pigments or other materials. Polyram UK Ltd gives no guaranty or warranty in connection with this data and it is to be used at individuals own discretion and risk.



Date of Issue - April 2021

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