PRODUCT INFORMATION

HAIPLEN H50 G6 BA

Polypropylene homopolymer 30% glass fibres reinforced chemically coupled to the resin matrix, medium flow and good mechanical properties.

ISO short	ISO 1043: PP-GF30
Form	Pellets

Key Features

- Good impact - stiffness balance
- Designed for injection moulding applications
- Glass fibres reinforced
- Good flowability

Availability

- XO: low odour emission
- XMT: long-term service stability for contact with copper
- LP: laser printable
- L: UV stabilized
- HT: high resistance to heat
- H: heat stabilized
- D: detergent stabilized
- All colours

Process

- INJECTION MOULDING

Application

- Power tools
- Household
- General purpose applications
- Furniture
- Electronic
- Electrical
- Consumer
- Building
- Automotive

Property	Method	Unit	Value	Condition	State
ELECTRICAL					
Dielectric Strength	IEC 60243-1	kV/mm	25		
Tracking Resistance (CTI - Method A)	IEC 60112	Volt	> 600		

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PHYSICAL

Density (+23°C)	ISO 1183	g/cm^3	1,12	
Filler content	ISO 3451	%	30	600°C - 1 h
Water Absorption (24h / +23°C)	ISO 62	%	0,2	
Mould Shrinkage (Parallel)	Internal method	%	0,2 - 0,4	
Mould Shrinkage (Normal)	Internal method	%	0,7 - 0,9	
Melt Flow Rate (MFR)	ISO 1133	g/10 min	10	230°C - 2,16 kg

MECHANICAL

Tensile Modulus	ISO 527-1,2	MPa	6500	Speed 1 mm/min
Elongation at Break	ISO 527-1,2	%	3,5	Speed 50 mm/min
Tensile Break Strength	ISO 527-1,2	MPa	85	Speed 50 mm/min
Flexural Modulus	ISO 178	MPa	6100	Speed 1 mm/min
Flexural Break Strength	ISO 178	MPa	125	Speed 1 mm/min
IZOD Notched Impact	ISO 180/1A	kJ/m^2	7,5	-30°C
IZOD Notched Impact (+23°C)	ISO 180/1A	kJ/m^2	11	
IZOD Notched Impact (+23°C)	ASTM D256	J/m	115	
CHARPY Notched Impact (+23°C)	ISO 179/1eA	kJ/m^2	10	
CHARPY Unnotched Impact (+23°C)	ISO 179/1eU	kJ/m^2	60	
CHARPY Notched Impact (-30°C)	ISO 179/1eA	kJ/m^2	8	
CHARPY Unnotched Impact (-30°C)	ISO 179/1eU	kJ/m^2	45	
Ball Indentation Hardness (H 358/30)	ISO 2039-1	MPa	110	

THERMAL

Softening Temperature - 1 kg (VST/A/50)	ISO 306	°C	160	
Softening Temperature - 5 kg (VST/B/50)	ISO 306	°C	133	
Deflection Temperature 1,80 MPa (HDT A)	ISO 75A	°C	145	
Deflection Temperature 0,45 MPa (HDT B)	ISO 75B	°C	158	
Heat ageing resistance	Internal method	°C	150	700 h (H version)

The listed data are in the normal range of product properties, they should not be used to establish specification nor as the basis of design. Values are valid for natural coloured version only.

Unless specified to the contrary, the given values have been established on standardized test specimens at room temperature. These values are for natural colour only. The figures should be regarded as guide values only and not as binding minimum values. Please note that, under certain conditions, the properties can be affected to a considerable extent by the design of the mold/die, the processing conditions, pigments and any other additives.

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Heat ageing resistance	Internal method	°C	150	1000 h (HT version)
Heat ageing resistance	Internal method	°C	150	300 h

FLAMMABILITY

Flame Behaviour (1,6 mm)	UL94	Class	HB	
Burning Rate (US-FMVSS 302)	ISO 3795	mm/min	< 80	Thickness > 1,5 mm
Oxigen index	ASTM D2863	%	20	

INJECTION MOULDING	Value
Drying Temperature (Desiccant Dryer)	80 - 100°C
Drying Time (Desiccant Dryer)	2 - 4 hours
Suggested Max Moisture	0,2%
Melt Temperature	220 - 250°C
Feed Temperature	50°C
Rear Temperature	200°C
Middle Temperature	220°C
Front Temperature	230°C
Nozzle Temperature	240°C
Mould Temperature	40 - 60°C
Injection Rate	50 - 150 mm/sec
Injection Pressure	60 - 120 MPa
Packing Pressure	30 - 80 MPa
Back Pressure	As low as possible (<0,3 MPa)
Screw Revolving Speed	25 - 50 rpm
Screw Revolving Speed	50 rpm @ Diameter 40 mm
Screw Revolving Speed	35 rpm @ Diameter 55 mm
Screw Revolving Speed	25 rpm @ Diameter 75 mm
Cushion	5 - 8 mm
Vent Depth	0,05 mm

Notes It is normally not necessary to dry HAIPLEN compounds, however should there be surface moisture (condensate) on the moulding compound as a result of incorrect storage, drying process is required. HAIPLEN must be stored indoors at a temperature below 40°C avoiding humidity and direct sunlight as well. HAIPLEN can be processed on a standard injection moulding unit. A general purpose metering screw is recommended with a zone distribution of 40% feed, 40% transition and 20% metering. When the heating cylinder is completely purged of HAIPLEN material the machine may be shut down.