PRODUCT INFORMATION

HAIPLEN H50 T4

Polypropylene homopolymer 20% talcum filled, medium flow, high stiffness.

ISO short ISO 1043: PP-MD20
Form Pellets

Key Features

- Designed for injection moulding applications
- Good flowability
- Mineral filled

Availability

- XO: low odour emission
- U: scratch resistant
- 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
- Garden furniture
- Furniture
- Electronic
- Electrical
- Automotive

Property	Method	Unit	Value	Condition	State
PHYSICAL					
Density (+23°C)	ISO 1183	g/cm^3	1,05		
Filler content	ISO 3451	%	20	550°C - 1 h	
Water Absorption (24h / +23°C)	ISO 62	%	0,05		
Mould Shrinkage (Parallel)	Internal method	%	1,1	Thickness 3,2 mm	
Mould Shrinkage (Normal)	Internal method	%	1,1	Thickness 3,2 mm	

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Melt Flow Rate (MFR)	ISO 1133	g/10 min	10	230°C - 2,16 kg
MECHANICAL				
Tensile Modulus	ISO 527-1,2	MPa	1350	+60°C / Speed 1 mm/min
Tensile Modulus	ISO 527-1,2	MPa	835	+90°C / Speed 1 mm/min
Tensile Modulus	ISO 527-1,2	MPa	2500	+23°C / Speed 1 mm/min
Elongation at Yield	ISO 527-1,2	%	6	+90°C / Speed 50 mm/min
Elongation at Yield	ISO 527-1,2	%	6	+60°C / Speed 50 mm/min
Elongation at Yield	ISO 527-1,2	%	5,5	+23°C / Speed 50 mm/min
Tensile Yield Strength	ISO 527-1,2	MPa	13	+90°C / Speed 50 mm/min
Tensile Yield Strength	ISO 527-1,2	MPa	20	+60°C / Speed 50 mm/min
Tensile Yield Strength	ISO 527-1,2	MPa	32	+23°C / Speed 50 mm/min
Elongation at Break	ISO 527-1,2	%	> 150	+60°C / Speed 50 mm/min
Elongation at Break	ISO 527-1,2	%	> 150	+90°C / Speed 50 mm/min
Elongation at Break	ISO 527-1,2	%	21,5	+23°C / Speed 50 mm/min
Tensile Break Strength	ISO 527-1,2	MPa	7	+90°C / Speed 50 mm/min
Tensile Break Strength	ISO 527-1,2	MPa	11	+60°C / Speed 50 mm/min
Tensile Break Strength	ISO 527-1,2	MPa	26,5	+23°C / Speed 50 mm/min
Flexural Modulus	ISO 178	MPa	1050	+60°C / Speed 2 mm/min
Flexural Modulus	ISO 178	MPa	650	+90°C / Speed 2 mm/min
Flexural Modulus	ISO 178	MPa	2600	+23°C / Speed 2 mm/min
Flexural Max Strength	ISO 178	MPa	24	+60°C / Speed 10 mm/min
Flexural Max Strength	ISO 178	MPa	15	+90°C / Speed 10 mm/min
Flexural Max Strength	ISO 178	MPa	50	+23°C / Speed 10 mm/min
IZOD Notched Impact (+23°C)	ISO 180/1A	kJ/m^2	2,5	
IZOD Notched Impact (+23°C)	ASTM D256	J/m	30	
CHARPY Unnotched Impact (+23°C)	ISO 179/1eU	kJ/m^2	40	
THERMAL				

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Softening Temperature - 1 kg (VST/A/50)	ISO 306	°C	150	
Softening Temperature - 5 kg (VST/B/50)	ISO 306	°C	95	
Deflection Temperature 1,80 MPa (HDT A)	ISO 75A	°C	75	
Ball Pressure Test	IEC 60695-10-2	°C	125	
Coefficient of linear thermal expansion (parallel)	ISO 11359-1,-2	K^-1	6x10E(-5)	

FLAMMABILITY

Flame Behaviour (1,6 mm)	UL94	Class	HB	
Glow Wire Flammability Index-GWFI (1 mm)	IEC 60695-2-12	°C	650	
Burning Rate (US-FMVSS 302)	ISO 3795	mm/min	< 80	Thickness > 1,5 mm

INJECTION MOULDING	Value
Drying Temperature (Desiccant Dryer)	70 - 80°C
Drying Time (Desiccant Dryer)	2 hours
Melt Temperature	190 - 220°C
Feed Temperature	160°C
Rear Temperature	180°C
Middle Temperature	190°C
Front Temperature	200°C
Nozzle Temperature	210°C
Mould Temperature	30 - 50°C
Injection Rate	Medium to Fast

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 / 105°F 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. The processing parameters like processing temperatures are a recommendation and can be adjusted in function of injection machine or extruder size, part geometry and design.