PRODUCT INFORMATION

HAIPLEN H50 T4 X0

Polypropylene homopolymer 20% talcum filled, medium flow, flame retardant UL94 V0, good mechanical properties.

ISO short	ISO 1043: PP-MD20 FR(17)
Form	Pellets
UL file	E143048

Key Features

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

Availability

- LP: laser printable
- L: UV stabilized
- H: heat stabilized
- D: detergent stabilized
- All colours

Compliance

- UL94 V0 approved all colours at 1,5 mm.

Process

- INJECTION MOULDING

Application

- Furniture
- Electronic
- Electrical
- Automotive

Property	Method	Unit	Value	Condition	State
ELECTRICAL					
Tracking Resistance (CTI - Method A)	IEC 60112	Volt	450		
PHYSICAL					
Density (+23°C)	ISO 1183	g/cm^3	1,34		
Water Absorption (24h / +23°C)	ISO 62	%	0,05		
Mould Shrinkage (Parallel)	Internal method	%	0,8 - 1,2		
Mould Shrinkage (Normal)	Internal method	%	0,8 - 1,2		
Melting temperature (DSC)	ISO 11357	°C	165		
Melt Flow Rate (MFR)	ISO 1133	g/10 min	10	230°C - 2,16 kg	
MECHANICAL					

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Tensile Modulus	ISO 527-1,2	MPa	4200	Speed 1 mm/min
Elongation at Yield	ISO 527-1,2	%	2,4	Speed 50 mm/min
Tensile Yield Strength	ISO 527-1,2	MPa	31	Speed 50 mm/min
Elongation at Break	ISO 527-1,2	%	> 5	Speed 50 mm/min
Tensile Break Strength	ISO 527-1,2	MPa	25	Speed 50 mm/min
Flexural Modulus	ISO 178	MPa	4100	Speed 2 mm/min
Flexural Max Strength	ISO 178	MPa	45	Speed 10 mm/min
IZOD Notched Impact (+23°C)	ASTM D256	J/m	40	

THERMAL

Softening Temperature - 1 kg (VST/A/50)	ISO 306	°C	155	
Softening Temperature - 5 kg (VST/B/50)	ISO 306	°C	95	
Deflection Temperature 1,80 MPa (HDT A)	ISO 75A	°C	95	
Deflection Temperature 0,45 MPa (HDT B)	ISO 75B	°C	130	
Ball Pressure Test	IEC 60695-10-2	°C	125	
Continuous service temperature (20.000 h)	UL746 B	°C	110	

FLAMMABILITY

Flame Behaviour (0,75 mm)	UL94	Class	V2	
Flame Behaviour (1,5 mm)	UL94	Class	V0	UL approved
Flame Behaviour (3,2 mm)	UL94	Class	V0	
Glow Wire Flammability Index-GWFI (1 mm)	IEC 60695-2-12	°C	960	
Glow Wire Ignition Temperature-GWIT (3,2 mm)	IEC 60695-2-13	°C	775	
Oxigen index	ASTM D2863	%	30	
Needle flame test (1,6 mm)	IEC 60695-11-5	-	PASSED	
Needle flame test (3,2 mm)	IEC 60695-11-5	-	PASSED	

INJECTION MOULDING	Value
Drying Temperature (Circulating Air Oven)	70 - 90°C
Drying Temperature (Desiccant Dryer)	70 - 90°C

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Drying Time (Circulating Air Oven)	3 - 5 hours
Drying Time (Desiccant Dryer)	0,5 - 2,5 hours
Suggested Max Moisture	0,2%
Suggested Max Regrind	< 5%
Melt Temperature	190 - 210°C
Feed Temperature	50°C
Rear Temperature	170°C
Middle Temperature	180°C
Front Temperature	190°C
Nozzle Temperature	200°C
Mould Temperature	40 - 60°C
Injection Rate	50 - 150 mm/sec
Screw Revolving Speed	50 - 100 rpm
Cushion	3 - 6 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.