PRODUCT INFORMATION

HAIPLEN H50 Y0

Polypropylene homopolymer medium flow, halogen free flame retardant UL94 V0, good mechanical properties.

ISO short	ISO 1043: PP FR(40)
Form	Pellets
UL file	E143048

Key Features

- Designed for injection moulding applications
- Halogen free
- Flame retardant
- Low density
- Antimony trioxide free

Availability

- XMT: long-term service stability for contact with copper
- LP: laser printable
- L: UV stabilized
- H: heat stabilized
- D: detergent stabilized
- All colours

Compliance

- UL94 V0 approved all colours at 1,6 mm.

Process

- INJECTION MOULDING

Application

- Power tools
- Household
- Electronic
- Electrical

Property	Method	Unit	Value	Condition	State
ELECTRICAL					
Dielectric Strength	IEC 60243-1	kV/mm	25		
Tracking Resistance (CTI - Method A)	IEC 60112	Volt	600		
PHYSICAL					
Density (+23°C)	ISO 1183	g/cm^3	1,05		
Water Absorption (24h / +23°C)	ISO 62	%	0,08		
Mould Shrinkage (Parallel)	Internal method	%	1,2		
Mould Shrinkage (Normal)	Internal method	%	1,2		
Melt Flow Rate (MFR)	ISO 1133	g/10 min	10	230°C - 2,16 kg	

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MECHANICAL

Tensile Modulus	ISO 527-1,2	MPa	2800	Speed 1 mm/min
Tensile Yield Strength	ISO 527-1,2	MPa	30	Speed 50 mm/min
Elongation at Break	ISO 527-1,2	%	5,0	Speed 50 mm/min
Flexural Modulus	ISO 178	MPa	2500	Speed 1 mm/min
IZOD Notched Impact (+23°C)	ASTM D256	J/m	30	

THERMAL

Softening Temperature - 1 kg (VST/A/50)	ISO 306	°C	155	50°C / h
Softening Temperature - 5 kg (VST/B/50)	ISO 306	°C	95	50°C / h
Deflection Temperature 1,80 MPa (HDT A)	ISO 75A	°C	90	120°C / h
Deflection Temperature 0,45 MPa (HDT B)	ISO 75B	°C	130	120°C / h
Ball Pressure Test	IEC 60695-10-2	°C	125	
Continuous service temperature (20.000 h)	UL746 B	°C	85	
Coefficient of linear thermal expansion (parallel)	ISO 11359-1,-2	K^-1	7,5x10E(-5)	

FLAMMABILITY

Flame Behaviour (1,6 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 (1,6 mm)	IEC 60695-2-13	°C	750	
Oxigen index	ASTM D2863	%	28	

INJECTION MOULDING	Value
Drying Temperature (Desiccant Dryer)	70 - 80°C
Drying Time (Desiccant Dryer)	2 - 4 hours
Suggested Max Moisture	0,2%
Suggested Max Regrind	< 15%
Melt Temperature	190 - 230°C
Feed Temperature	160°C
Rear Temperature	175°C

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Middle Temperature	200°C
Front Temperature	210°C
Nozzle Temperature	220°C
Back Pressure	5 - 10 Mpa
Screw Revolving Speed	< 300 mm/sec
Cushion	< 5 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 / 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.