PRODUCT INFORMATION

HAIPLEN EP80 Y2

Polypropylene copolymer medium viscosity, halogen free flame retardant UL94 V2, good mechanical properties. Designed for electrical applications requiring the compliance with RoHS decree (2002/95/CE).

ISO short	ISO 1043: PP FR(30)
Form	Pellets
UL file	E143048

Key Features

- Unfilled
- Designed for injection moulding applications
- Halogen free
- Flame retardant
- Good flowability
- Low density

Availability

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

Compliance

- UL94 V2 approved all colours at 1 mm - UL746 A (HAI, HWI and CTI ratings), GWFI and GWIT ratings approved.

Process

- INJECTION MOULDING

Application

- Power tools
- Household
- Furniture
- Electronic
- Electrical
- Consumer
- Building

Property	Method	Unit	Value	Condition	State
ELECTRICAL					
Tracking Resistance (CTI - Method A)	IEC 60112	Volt	600	UL746 A CTI class 0	
PHYSICAL					
Density (+23°C)	ISO 1183	g/cm^3	1,03		
Water Absorption (24h / +23°C)	ISO 62	%	0,05		
Mould Shrinkage (Parallel)	Internal method	%	1,3		

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Mould Shrinkage (Normal)	Internal method	%	1,3	
Melt Flow Rate (MFR)	ISO 1133	g/10 min	15	230°C - 2,16 kg
MECHANICAL				
Tensile Yield Strength	ISO 527-1,2	MPa	35	Speed 50 mm/min
Elongation at Break	ISO 527-1,2	%	>50	Speed 50 mm/min
Flexural Modulus	ISO 178	MPa	2000	Speed 1 mm/min
IZOD Notched Impact	ASTM D256	J/m	40	+23°C
THERMAL				
Softening Temperature - 1 kg (VST/A/50)	ISO 306	°C	138	
Softening Temperature - 5 kg (VST/B/50)	ISO 306	°C	92	
Deflection Temperature 1,80 MPa (HDT A)	ISO 75A	°C	70	
Ball Pressure Test	IEC 60695-10-2	°C	125	
Continuous service temperature (20.000 h)	UL746 B	°C	90	
FLAMMABILITY				
Flame Behaviour (1 mm)	UL94	Class	V2	UL approved
Flame Behaviour (1,6 mm)	UL94	Class	V2	UL approved
Flame Behaviour (3,0 mm)	UL94	Class	V2	UL approved
Glow Wire Flammability Index-GWFI (1 mm)	IEC 60695-2-12	°C	825	UL approved
Glow Wire Ignition Temperature-GWIT (1 mm)	IEC 60695-2-13	°C	850	UL approved
Oxigen index	ASTM D2863	%	25	
HAI (1,0 mm)	UL746 A	PLC	0	UL approved
HAI (1,6 mm)	UL746 A	PLC	0	UL approved
HAI (3,0 mm)	UL746 A	PLC	0	UL approved
HWI (1,0 mm)	UL746 A	PLC	3	UL approved
HWI (1,6 mm)	UL746 A	PLC	2	UL approved
HWI (3,0 mm)	UL746 A	PLC	1	UL approved

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INJECTION MOULDING	Value
Drying Temperature (Desiccant Dryer)	70 - 80°C
Drying Time (Desiccant Dryer)	2 - 4 hours
Suggested Max Regrind	< 10%
Melt Temperature	180 - 220°C
Feed Temperature	150°C
Rear Temperature	170°C
Middle Temperature	190°C
Front Temperature	200°C
Nozzle Temperature	210°C
Mould Temperature	30 - 70°C
Injection Rate	Slow to Medium
Injection Pressure	50 - 120 Mpa
Packing Pressure	30 - 100 Mpa
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 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.