



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 Form 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 | | |

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.

All information, recommendation or technical advice provided by TARO PLAST S.p.A. are given in good faith but without warranty, to the best of its knowledge and based on current procedures in effect. Our advice does not release you from the obligation to check its validity and to test our products as to their suitability for the intended processes and uses. The application, use and processing methods and conditions of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely under your own responsibility.

PRODUCT INFORMATION

HAIPLEN EP80 Y2

| | | | | |
|--------------------------|-----------------|----------|-----|-----------------|
| 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 |
| Oxygen 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 |

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.

All information, recommendation or technical advice provided by TARO PLAST S.p.A. are given in good faith but without warranty, to the best of its knowledge and based on current procedures in effect. Our advice does not release you from the obligation to check its validity and to test our products as to their suitability for the intended processes and uses. The application, use and processing methods and conditions of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely under your own responsibility.

PRODUCT INFORMATION

HAIPLEN EP80 Y2

| 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.

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.

All information, recommendation or technical advice provided by TARO PLAST S.p.A. are given in good faith but without warranty, to the best of its knowledge and based on current procedures in effect. Our advice does not release you from the obligation to check its validity and to test our products as to their suitability for the intended processes and uses. The application, use and processing methods and conditions of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely under your own responsibility.