

FORMPOLY® NYLON12

GENERAL

FPL offers a wide range of Nylon12 grades from unfilled to glass fibre reinforced, including **FORMPOLY® N12GP30M** which is unfilled Nylon 12 with good modulus and moderate mechanical properties.

FORMPOLY® N12GP30M

- Higher Impact resistance
- Reduced sensitivity to notch
- Good finish and Gloss
- Easy flow and fast solidification
- High elongation
- Low density
- Excellent abrasion resistance
- Good fatigue behaviour
- High resistance to stress cracking

PACKING

FORMPOLY® N12GP30M is supplied in 25 Kgs. dry, ready to mould, in sealed bags to prevent the uptake of moisture.

APPLICATION

- OFC Sheathing
- Pneumatic tubing
- Air break tubing
- Cable sheathing
- Noiseless Gear/clips
- Heater Wire insulation

| Property | ASTM Method | Unit | N12GP30M |
|--|-------------|----------|----------|
| Tensile Strength at Yield | D638 | MPa | 40 |
| Tensile Strength at Yield after aging in Oil | D638 | MPa | 37 |
| Elongation at Break | D638 | % | 300 |
| Elongation at Break after aging in Oil | D638 | % | 260 |
| Tensile Modulus | D638 | MPa | 1000 |
| Flexural Strength | D790 | MPa | 50 |
| Izod impact Strength at 23°C | D256 | kg.cm/cm | NB |
| Izod impact Strength at -40°C | D256 | kg.cm/cm | NB |
| Izod impact Strength-Notched at 23°C | D256 | kg.cm/cm | 10 |
| Izod impact Strength-Notched at -40°C | D256 | kg.cm/cm | 7 |
| Hardness | D2240 | Shore D | 75 |
| Specific Gravity | D792 | - | 1.02 |
| Moisture absorption after 24 hours | D570 | % | 0.1 |
| Moisture absorption at Saturation | D570 | % | 0.6 |
| Flammability | UL94 | - | HB |
| Melting Point | D3418 | °C | 185 |

Conditioned test specimen. All results are measured under Dry-as-moulded natural test specimen Coloured grades would record slightly lower mechanical properties as permitted by ASTM D-4066

The information present here is for general guidance. It is given in good faith but no warrant is attached

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PROCESSING OF FORMPOLY NYLON 12

FORMPOLY® grades can be processed in extruders with min L/D of 24 with compression ratio of 3.0 to 3.5. Material can be processed with zone temperature from 230 C to 210.

PRE-DRYING

FPL grades can normally be taken for direct processing. However, in case the material is exposed to atmosphere, it is advisable to pre-dry the material at 80°C for 2 to 3 hours for good surface finish.

PROCESS PARAMETERS SUGGESTED

| PROCESSING PARAMETERS | |
|-----------------------|--------------|
| ZONE1 | 190 -200°C |
| ZONE2 | 190-200°C |
| ZONE3 | 190 -200°C |
| ZONE4 | 200-215°C |
| Flange 1 | 200-215°C |
| Flange 2 | 200-215°C |
| Die | 215-230°C |
| Vacuum | 0.1 -0.2 bar |
| Water Temperature | 15° c- 25°c |

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