

Product Description

EL-Pro P400S is a homopolymer polypropylene resin which is suitable for monofilament and flat yarn products. Which is manufactured by extrusion process with spinnerette die, annular die, T-die, coathanger die, etc.

Typical Application

- Small-sized woven bag
- Rope, Strap
- Tarpaulin, Sheet

Product Characteristics

- High productivity
- Good mechanical properties
- Food contact applicable (Complies with U.S FDA 21 CFR 177.1520)

Physical Properties

Property	Test Method	Value	Unit
Melt Flow Rate	ASTM D 1238 @ 230°C, 2.16 kg	3.5	g/10 min
Density	ASTM D 1505	0.910	g/cm ³
Tensile Strength at Yield	ASTM D 638 @ Crosshead speed 50 mm/min	320	kg/cm ²
Tensile Strength at Break	ASTM D 638 @ Crosshead speed 50 mm/min	250	kg/cm ²
Elongation at Break	ASTM D 638 @ Crosshead speed 50 mm/min	650	%
Flexural Modulus	ASTM D 790	13500	kg/cm ²
Notched Izod Impact	ASTM D 256 @ 23°C	4	kg.cm/cm
Notched Izod Impact	ASTM D 256 @ 0°C	2.5	kg.cm/cm
Notched Izod Impact	ASTM D 256 @ -20°C	1.7	kg.cm/cm
Rockwell Hardness	ASTM D 785	85	R-Scale
Haze	ASTM D 1003	50	%
Gloss	ASTM D 2457	65	%
ESCR	ASTM D 1693 @ 50°C (Condition B, Injection Molded, 25% Igepal)	>500	hrs, F ₅₀
Melting Point	ASTM D 2117	163	°C
Vicat Softening Point	ASTM D 1525	155	°C
Heat Deflection Temperature (HDT)	ASTM D 648 @ 4.6 kg/cm ²	110	°C
	ASTM D 648 @ 18.5kg/cm ²	60	°C

Note : Conversion factor for changing unit from kg/cm² to MPa is divided by 10.20

Processing Techniques

The actual processing conditions depend on each machine type, product dimensions and environment.

Generally, recommended screen mesh size 100-120 and allowable pressure should be less than 135 bar.

Recommended processing conditions:

Monofilament : Melt temperature range 250 - 280°C, Stretching Temperature 95 - 110°C, Stretching Ratio 8 - 12

Flat yarn: Melt temperature range 220 - 270°C, Stretching Temperature 120 - 140°C, Stretching Ratio 5 - 7

Product Available Form

- Pellet

Product Handling

- 25 kg loose bag
- Big Bag with specified weight

Product Technical Assistance

For technical assistance or further information on this product or any other EL-Pro products, please contact EL-Pro representatives.

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