



TPPL Wire & Cable Compounds

Technical Data Sheet

TPJ 301 (LLDPE Black Jacketing compound)

TPJ 301 is a Linear low density polyethylene black jacketing compound combining excellent processing and environmental stress crack performance. It contains a well dispersed carbon black, to impart excellent UV degradation resistance, and an antioxidant package to impart excellent resistance to thermo-oxidative degradation.

APPLICATION

TPJ 301 is for jacketing of medium / high voltage power cables produced at high extrusion speeds.

SPECIFICATIONS

TPJ 301 complies with the following raw material specification & jacketed cables standards.

ASTM D128 Type 1, Class C Category 4 Grade J3, E4, E5

IEC 60502: Type ST3/ST7, IEC 60840: Type ST3/ST7

Properties

Tests	Test Method	Unit	Typical Values
Density	ASTM D1505	g / cm ³	0.93
Melt flow rate	ASTM D1238	g /10min.	0.9
Carbon Black Content	ASTM D1603	Wt %	2.55
Tensile Strength ⁽¹⁾	IEC 60811-1-1	MPa	23
Elongation at break ⁽¹⁾	IEC 60811-1-1	%	600
Environmental Stress Cracking (F ₂₀)	IEC 60811-4-1/B	h	>1000
Dielectric Strength ⁽²⁾	IEC 60243	KV/mm	>21
DC Volume Resistivity ⁽²⁾	ASTM D 257	Ω.cm	1 x 10 ¹⁵

(1)Tests performed on 0.8 mm extruded tape. (2)Tests performed on 2 mm pressed sheet.

Packaging

TPJ 301 pellets available in the following packages: -

- * 25 kg moisture resistant heat sealed sacks and palletized, net weight 500 kg stretch wrapped for environment protection.
- * 500 / 1000 kg Boxes with moisture resistant liner, palletized boxes stretch wrapped for environment protection.

Processing:

TPJ 301 possesses excellent extrusion characteristics; as a general guide, a melt temperature in the range of 210°C to 230°C yields satisfactory results. Precise temperature profile values will vary depending on the extruder type, die tooling, cable size and line speed employed.

Storage & Handling

TPJ 301 must be stored unopened in a dry & stable temperature environment for optimum performance. A temperature range of 10 °C to 45 °C is recommended.