

# ExxonMobil™ LLDPE LL 1004YB Wire & Cable

## Linear Low Density Polyethylene Resin

### Product Description

LL 1004YB is a C4 Ziegler Natta LLDPE, especially designed for Low Voltage power cable insulation, using the two-step silane cross-linking process. The grade contains a higher level of antioxidants and has excellent Environmental Stress Crack Resistance (ESCR). Sufficient Cu-inhibitor should be added to meet specific ageing requirements for insulation. For jacketing applications, addition of Carbon Black or UV stabilizer is required.

### General

Additive	▪ Antiblock: No	▪ Slip: No	▪ Thermal Stabilizer: Yes
Applications	▪ Halogen-free flame retardant (HFFR) compounds ▪ LV silane cross-linkable insulation - 1 step process ▪ LV silane cross-linkable insulation - 2-step process		
Form(s)	▪ Pellets		

Resin Properties	Typical Value (English)	Typical Value (SI)	Test Based On
Density	0.918 g/cm <sup>3</sup>	0.918 g/cm <sup>3</sup>	ExxonMobil Method
Melt Index (190°C/2.16 kg)	2.8 g/10 min	2.8 g/10 min	ASTM D1238
Peak Melting Temperature	248 °F	120 °C	ExxonMobil Method

Molded Properties	Typical Value (English)	Typical Value (SI)	Test Based On
Tensile Strength at Yield	1700 psi	12 MPa	ASTM D638
Tensile Strength at Break	2000 psi	14 MPa	ASTM D638
Elongation at Yield	20 %	20 %	ASTM D638
Elongation at Break	690 %	690 %	ASTM D638
Flexural Modulus - 1% Secant	45000 psi	310 MPa	ASTM D790
Durometer Hardness (Shore D, 15 sec)	47	47	ASTM D2240

Electrical	Typical Value (English)	Typical Value (SI)	Test Based On
Volume Resistivity	> 1.0E+16 ohms-cm	> 1.0E+16 ohms-cm	ASTM D257
Dielectric Constant (60 Hz)	2.2	2.2	ASTM D150
Dissipation Factor (60 Hz)	< 4E-4	< 4E-4	ASTM D150

