



### Black LLPE Jacketing Compound

- **Description**

ZARPLS™ LLB8706 is a black linear low density compound for jacketing of power and communication cables. Characterized by:

- \* High melting temperature (approximately 120°C)
- \* Low coefficient of friction
- \* Good abrasion resistance
- \* Good petroleum-jelly resistance
- \* Low water permeability
- \* Very wide processing window

ZARPLS™ LLB8706 contains 2.5% well-dispersed carbon black in order to ensure excellent weathering resistance

- **Applications**

ZARPLS™ LLB8706 is intended for jacketing of power and communication cables. The abrasion resistance combined with low coefficient of friction makes it ideally suitable for jacketing of fiber optic cables.

- **Specifications**

ZARPLS™ LLB8706 meets the applicable requirements as below when processed using sound extrusion practice and testing procedure:

ASTM D 1248 Type I, Class C, Category 4, Grade J3, E4, E5, W2-4

BS 6234: Type 03C, TS2

BT M 132

EN 50290-2-24

HD 620 S1, Part 1, table 4B, DMP 12, 14, 17

IEC 60502 ST3

IEC 60708

IEC 60840, ST3

ISO 1872-PE, KCHL, 18-D006

NF C 32-060

REA Bulletin 345-21

US MIL SPEC LP 390 C, Type III, Class L, Grade 2, 3 and 4, Category 4



**Black LLPE Jacketing Compound**

• **Physical Properties**

Data should not be used for specification work

Property	Typical Value	Test Method
Density (Base Resin)	0.921 gr/cm <sup>3</sup>	ISO 1183
Density (Compound)	0.925 gr/cm <sup>3</sup>	ISO 1183
Carbon Black Content	2.5 +/- 0.3 %	ASTM D1603
Carbon Black Dispersion (Photomicrographs for evaluation)	A1 , A2	ISO 18553
Carbon Black Dispersion (grading of particles , agglomerates)	Max 2.5	ISO 18553
Light Absorption coefficient Abs/mm	>420	ASTM D 3349
Melt Flow rate (190°C , 2.16 kg)	0.8 gr/10 min	ISO 1133
Elongation at Break (250 mm/min)	700 %	IEC 60811-401
Tensile Strength (250 mm/min)	26 N/mm <sup>2</sup>	IEC 60811-401
Aging oven 100°C , 10 days , Retention of Tensile Strength	>85%	ASTM D638
Aging oven 100°C , 10 days , Retention of Elongation break	>85%	ASTM D638
Hardness Shore D (1s)	52	ISO 868
Brittleness Temperature	< -76 °C	ASTM D 746
Thermal Stress Cracking	>98 °C	ASTM D2951
O.I.T (Oxidative Induction Time) @200°C	> 120 minutes	ASTM D3895
ESCR , 50°C , 10% Igepal , F0	>5000 h	ASTM D 1693

• **Electrical Properties**

Data should not be used for specification work

Property	Typical Value	Test Method
Dielectric Constant (1MHz)	2.5	IEC 60250
Dissipation Factor (1MHz)	0.0004	IEC 60250
DC Volume Resistivity	10 <sup>16</sup> Ohm.cm	IEC 60093
Dielectric Strength	20 kV/mm	IEC 60243

• **Processing Guidelines**

ZARPLS™ LLB8706 provides excellent surface finish and allows a broad processing window. Standard PE-screw gives satisfactory results but also low compression screws can be used successfully. We suggest a temperature profile as below:

Feed section: 170°C

Metering section: 200°C

Head and die 210° C

If preheating and/or drying is used, the maximum temperature should be 90°C.





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- Processing Techniques**

ZARPLS™ LLB8706 provides excellent surface finish and allows a broad processing window. ZARPLS™ LLB8706 is suitable for most equipment designed for PVC/PE extrusion. To minimize shrink back gradient cooling with hot water, minimum 60°C in the first part of the cooling trough, is strongly recommended.

If preheating and/or drying is used, the maximum temperature should be 90°C.

Preheating	90 °C	Maximum recommended temperature
Melt temperature	180 - 190 °C	
Cooling water	60 °C	First part of cooling trough

Extruder Zones Temperature : Z1 .... Z5 : 150/160/170/180/190

Cross head : 200 (could be up to 240 depending on line speed)

Die : 220 (could be up to 280 depending on line speed)

- Packaging**

Big-Bags (from 500 to 1200 kg)

Tetrabin (500 kg – 1200 kg)

Bags (25 kg ; 55 bags on one pallet , 1375 kg on each pallet)

- Safety**

The product is not classified as a dangerous preparation and is intended for industrial use only. Check and follow local codes and regulations!

Please see our Safety Data Sheet for details on various aspects of safety of the product, for more information contact ZARPOLMER.

