



### Black MDPE Jacketing Compound

- **Description**

ZARPLS™ MDB5062 is a black medium density (MD) jacketing compound. ZARPLS technology allows the manufacturing of polymers outside the traditional MFR and density range making it possible to optimize Processibility, reduce shrinkage and yet provide excellent physical toughness and environmental stress crack resistance (ESCR).

ZARPLS™ MDB5062 contains 2.5% well-dispersed carbon black in order to ensure excellent weathering resistance

- **Applications**

ZARPLS™ MDB5062 is designed for: Jacket for energy and communication cables . The physical toughness and very low water permeability of the compound make it an ideal solution especially for buried power cables.

ZARPLS™ MDB5062 offers a balance of properties giving advantages in manufacturing, installation and lifetime performance of energy and communication cables.

- **Specifications**

ZARPLS™ MDB5062 meets the applicable requirements as below when processed using sound extrusion practice and testing procedure:

ASTM D 1248 Type II, Class C, Category 4, Grade E8, E9, J4  
ISO 17855-PE-MD, , KCHL, 33-D-006  
DIN VDE 0207, Type 2YM3  
DIN 57818/VDE 0818  
EN 50290-2-24 BSI 6622  
HD 620 S1, Part 1, table 4B, DMP 2, 8-12, 14, 15  
IEC 60502, Type ST7  
IEC 60708  
IEC 60840, Type ST7  
NF C32-060  
ICEA S-87-640  
ANSI/NEMA WC74/ICEA S-93-639  
DIN VDE 0818

- **Special features**

ZARPLS™ MDB5062 consists of specially selected components to offer:

Superior Processibility  
Excellent environmental stress cracking resistance (ESCR)  
Excellent abrasion & scratch resistance  
Low water permeability





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- Outstanding UV resistance
- Low shrinkage
- Excellent surface hardness
- Low heat deformation

- Physical Properties**

Data should not be used for specification work

Property	Typical Value	Test Method
Density (Base Resin)	0.938 gr/cm <sup>3</sup>	ISO 1183
Density (Compound)	0.94 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
Melt Flow rate (190°C , 2.16 kg)	0.7 gr/10 min	ISO 1133
Melt Flow rate (190°C , 5 kg)	2.9 gr/10 min	ISO 1133
Elongation at Break (250 mm/min)	500 %	IEC 60811-401
Tensile Strength (250 mm/min)	27 N/mm <sup>2</sup>	IEC 60811-401
Elongation at Break After Aging 110°C and 240 h	Min 300 %	IEC 60811-401
Tensile Strength After Aging 110°C and 240 h	Min 16.5 N/mm <sup>2</sup>	IEC 60811-401
Hardness Shore D (1s)	58	ISO 868
Hardness Shore D (3s)	56	DIN 53505
Brittleness temperature	Max -75 °C	ASTM D 746
Pressure Test at High Temperature	< 5 %	IEC 60811-3-1
ESCR , 50°C , 10% Igepal , F0	>5000 h	ASTM D 1693
O.I.T (Oxidative Induction Time) @200°C	> 50 minutes	ASTM D3895

- 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)	0.0005	IEC 60250
DC Volume Resistivity	10 <sup>16</sup> Ohm.com	IEC 60093
Dielectric Strength	30 kV/mm	IEC 60243

- Processing Techniques**

ZARPLS™ MDB5062 provides excellent surface finish and allows a broad processing window. ZARPLS™ MDB5062 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.





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- **Extrusion**

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)

- **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.

