



Black HDPE Jacketing Compound

- **Description**

ZARPLS™ HDB6072 is a black high density (HD) 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™ HDB6072 contains 2.5% well-dispersed carbon black in order to ensure excellent weathering resistance

- **Applications**

ZARPLS™ HDB6072 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™ HDB6072 offers substantially reduced shrinkage which helps to maintain low signal attenuation for fiber optic communication cables and low jacket retraction for energy cables in combination with excellent mechanical and barrier properties. ZARPLS™ HDB6072 offers a balance of properties giving advantages in manufacturing, installation and lifetime performance of communication and energy cables.

- **Specifications**

ZARPLS™ HDB6072 meets the applicable requirements as below when processed using sound extrusion practice and testing procedure:

ASTM D 1248 Type III, Class C, Category 4, Grade E8, E9, J4, W8,9
DMP 2, 5, 7, 8, 9, 10, 11, 12, 14, 15
DIN VDE 0207 Type 2YM3 EN 50290-2-24
DIN 57818/VDE 0818
EN 50290-2-24 BSI 6622
HD 603 S1, DMP 1, 2, 5, 7, 8
HD 620 S2, Part 1, table 4B, DMP 2, 8-12, 14-15, 17
HD 632 S2, ST7
IEC 60502, Type ST7 IEC 60840, Type ST7 IEC 62067, Type ST7
IEC 60708
ISO 1872-PE, KCHL, 40 D-022
IEC 60794
EN 187105

- **Special features**

ZARPLS™ HDB6072 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)	0.94 gr/cm ³	ISO 1183
Density (Compound)	0.95 gr/cm ³	ISO 1183
Carbon Black Content	2.5 +/- 0.3 %	ASTM D1603
Carbon Black Dispersion (Photomicrographs for evaluation)	A1 , A2	ISO 18553
Absorption coefficient (abs/m) Typical value	400	ASTM D3349
Melt Flow rate (190°C , 2.16 kg) Approx	1.5 g/10 min	ISO 1133
Brittleness Temperature	< -76 °C	ASTM D 746
Elongation at Break (50 mm/min)	950 %	IEC 60811-401
Tensile Strength (50 mm/min)	30 N/mm ²	IEC 60811-401
Hardness Shore D (1s)	60	ISO 868
Shrinkage test (on power cable) 80°C , 5hours	<1 %	IEC 60502 ST7
Shrinkage test (on telecom cable) 115°C , 1hours	<1 %	IEC 60708
Pressure Test at High Temperature (115°C)	< 10 %	IEC 60811-3-1
O.I.T (Oxidative Induction Time) @200°C	> 40 minutes	ASTM D3895
ESCR , 50°C , 10% Igepal , F0	>3000 h	ASTM D 1693

- **Electrical Properties**

Data should not be used for specification work

Property	Typical Value	Test Method
DC Volume Resistivity	10 P.Ohm.com	IEC 60093
Dielectric Strength	>20 kV/mm	IEC 60243

- **Processing Techniques**

ZARPLS™ HDB6072 provides excellent surface finish and allows a broad processing window. ZARPLS™ HDB6072 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

- **Packaging**

Big-Bags (from 500 to 1200 kg)

Octabins (Max 600 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.