



Black HDPE Jacketing Compound

- **Description**

ZARPLS™ HDB1380 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™ HDB1380 contains 2.5% well-dispersed carbon black in order to ensure excellent weathering resistance

- **Applications**

ZARPLS™ HDB1380 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™ HDB1380 offers a balance of properties giving advantages in manufacturing, installation and lifetime performance of energy and communication cables.

- **Specifications**

ZARPLS™ HDB1380 meets the applicable requirements as below when processed using sound extrusion practice and testing procedure:

ASTM D 1248 Type III, Class C, Category 4 and 5 Grade E8, E9, J4, W8,9

ISO 1872-PE , KHL , 50-D003

BS 6234: Type H03C, TS2

DIN VDE 0207, Type 2YM3

DIN 57818/VDE 0818

ICEA S-94-649 , S-108-720 , S-87-640

EN 50290-2-24 BSI 6622

HD 620 S1, Part 1, table 4B, DMP 2, 8-12, 14, 15

IEC 60502, 60840, 62067 Type ST7

IEC 60708

ISO 1872-PE, KCHL, 45 D-006

NF C32-060

- **Special features**

ZARPLS™ HDB1380 consists of specially selected components to offer:

Superior Processibility

Excellent environmental stress cracking resistance (ESCR)

Excellent abrasion & scratch resistance

Low water permeability

Outstanding UV resistance

Low shrinkage



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Excellent surface hardness

Low heat deformation

- Physical Properties**

Data should not be used for specification work

Property	Typical Value	Test Method
Density (Compound)	0.96 gr/cm ³	ISO 1183
Melt Flow rate (190°C , 2.16 kg)	0.28 g/10 min	ISO 1133
Melt Flow rate (190°C , 21.6 kg)	30 g/10 min	ISO 1133
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
Absorption Coefficient	460 AB/M	ASTM D 3349
Taber Abrasion Resistance (100 cycles)	20 mg	ASTM D 1242
Elongation at Break (250 mm/min)	500 %	IEC 60811-401
Tensile Strength (250 mm/min)	25 N/mm ²	IEC 60811-401
Retention of Elongation at Break (110°C , 14 days)	94 %	IEC 60811-401
Retention Tensile Strength (110°C , 14 days)	94%	IEC 60811-401
Hardness Shore D (1s)	65	ISO 868
Hardness Shore D (3s)	60	ISO 868
Brittleness Temperature	-76 C	ASTM D746
Pressure Test at High Temperature (115°C)	< 50 %	IEC 60811-3-1
O.I.T (Oxidative Induction Time) @200°C	> 190 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	7.5E+16 Ohm.com	IEC 60093
Dielectric Strength	>20 kV/mm	IEC 60243

- Processing Techniques**

ZARPLS™ HDB1380 provides excellent surface finish and allows a broad processing window. ZARPLS™ HDB1380 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.