PE Compound

ZARPLS™ HD4872

Technical Datasheet

Natural Color HDPE Insulating Compound

- **Description**

ZARPLS™ HD4872 is It is a HDPE compound for solid insulation of symmetric data cable at high extrusion speed. It provides excellent processability, environmental and thermal stress cracking resistance. It meets major international aging test specification for both solid and foam/skin insulation.

- **Applications**

ZARPLS™ HD4872 is intended for all types of PE insulated telecommunication cables such as:
High frequency data transmission cables(like Cat5,5e,Cat6 ,6e) Outer skin of foam-skin constructions

NOTE: If using ZARPLS™ HD4872 as telephone single insulation, especially in petroleum jelly filled cables, addition of extra stabilization may be needed to ensure long-term heat stability.

- **Specifications**

ZARPLS™ HD4872 meets the applicable requirements as below when processed using sound extrusion practice and testing procedure:

ISO 1872-PE, KGHN, 45-D006
ASTM D 1248 Type III, Class A, Category 4, Grade E8, E9
EN 50290-2-23 1
NF C32-060
BS 6234 : Type H03
DIN VDE 0818

Cables manufactured with ZARPLS™ HD4872 using sound extrusion practice normally comply with the following cable product standards:

IEC 61156
EN 50288
IEC 60708

- **Special features**

ZARPLS™ HD4872 consists of specially selected components to offer:

Good conductor adhesion
Very good flow behavior
Low die head pressure
Excellent surface finish High output

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- **Physical Properties**
  Data should not be used for specification work

Property	Typical Value	Test Method
Density (Compound)	0.945 gr/cm3	ISO 1183-1
Melt Flow rate (190°C , 2.16 kg)	0.7 gr/10 min	ISO 1133
Melt Flow rate (190°C , 5 kg)	2.6 gr/10 min	ISO 1133
Elongation at Break (250 mm/min)	>500 %	IEC 60811-401
Tensile Strength (250 mm/min)	25 N/mm2	IEC 60811-401
Oxidative Induction Time (OIT) @200°C	>120 min	ISO 11357-6
Shrinkage @115°C and 1 hour (IEC 60708 6.1.2)	<2 %	IEC60811-1-3
Brittleness temperature	<-76 °C	ASTM D746
Hardness Shore D (1s)	60	ISO 868
Hardness Shore D (3s)	58	DIN 53505
ESCR , 50°C , 10% Igepal , F0	>100 h	ASTM D 1693

- **Electrical Properties**
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Property	Typical Value	Test Method
Dielectric constant (1 MHZ)	2.3	IEC 60250
DC Volume Resistivity	12 P.Ohm.m	IEC 60093
Dissipation Factor (1 MHZ)	0.00009	IEC 60250

- **Processing Techniques**

ZARPLS™ HD4872 provides excellent surface finish and allows a broad processing window. The actual conditions will depend on the type of equipment used.

ZARPLS™ HD4872 can be processed using a wide range of process conditions at very high line speeds (typically up to 2500 m/min).For normal extrusion equipment's and applications, we suggest a melt and conductor preheating temperatures as outlined below. Heated water (up to 50°C) in the first cooling trough has been found beneficial to improve conductor adhesion.

Tooling : Pressure tooling is invariably required. Typically "on size" die diameters are used.

- **Extrusion**

Conductor Preheating	110-120 °C
Barrel	165 - 230 °C
Die head	230 °C
Melt temperature	220 - 250 °C

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- **Packaging**

  Jambo bags (1000 - 1200 kg)
  Bags (25 kg ; 55 bags on one pallet total 1375 kg)

- **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.