

BLS 4444

HIGH DENSITY POLYETHYLENE COMPOUND FOR INSULATION OF DATA & TELECOMMUNICATION CABLES

DESCRIPTION

BLS Polymers Ltd. introduces another sophisticated compound for insulation of Data and Telecommunication Cables – **BLS 4444** a HDPE based Natural Colourable Compound protected against copper & thermal degradation. The compound manufactured incorporating the metal deactivator, long term heat stabilisers for enhancement of insulation properties for core insulation of copper conductor of Jelly Filled Cables, dry core cables and RG 5 and RG 6 type coaxial cable. This compound meets the stringent quality requirement for Communication & Coaxial Filled / Unfilled Cables.

SPECIFICATIONS COMPLYING

BLS 4444 conforms to ASTM D 1248 Type III Class A Category 4 Grade E8, E9, BS 6234 Type H03, TEC GR/CUG-01/03 AUG 2003, IEC 60708, and EN 50290-2-23.

TYPICAL PROPERTIES

PROPERTY	TEST METHOD	UNIT	TYPICAL VALUE
Density	ASTM D 1505	g/cc	0.945±0.002
Melt Flow Index (190°C, 2.16 Kg Load)	ASTM D 1238	gm / 10 min	0.7±0.1
Tensile Strength	ASTM D 638	Kg / Cm ²	240
Elongation at Break	ASTM D 638	%	700
O.I.T.	ASTM D 3895	Minutes	> 80
ESCR	ASTM D 1693	Hrs	No Cracks in 96 hrs
Moisture Content	ASTM D 817	%	0.02
Dielectric Strength	ASTM D 149	KV/mm	>23
Dielectric Constant (Permittivity @ 1MHZ)	ASTM D 150	-	2.3
Volume Resistivity	ASTM D 257	Ohms – cm	2 X 10 ¹⁵
Dissipation Factor (@ 1MHz)	ASTM D 150		0.0004
Thermal Stress Cracking for 96 hrs. @ 100°C	ASTM D 2951	-	No visible crack
Brittleness Temperature	ASTM D 746	°C	> -76

*The typical values reported in the above table have been obtained from measurements made on extruded samples or pressed plates.

PROCESSING METHOD

It is advisable to preheat the **BLS 4444** at 80°C for 2-3 hours at the time of use for best results.

BLS 4444 can be processed in standard PE extruder.

Suggested Temperature Profile

TECHNICAL DATA SHEET

(Rev. No. 03, Date: 03.01.2025)

Zone 1	160 - 165°C
Zone 2	165 - 175°C
Zone 3	175 - 185°C
Zone 4	185 - 200°C

Collar	205 - 215°C
Head	210 - 220°C
Die	220 - 230°C

First zone of cooling water trough should be maintained between 50-60°C

Air gap should be adjusted for maintaining low shrinkage

STORAGE & SELF LIFE

BLS 4444 must be stored in ambient temperature (not exceeding 50°C) in a shaded area in sealed and intact bags to avoid exposure to sunlight and moisture. Long storing may affect the property of the compound and for this reason should be used within 12 months from the compounding date. It is better to measure the moisture and dry the material using dehumidifier dryer before use after long storage.

PACKAGING

BLS 4444 is available in 25 kg bags, 700 kg Jumbo bags in pallet, 25 kg bags collated in a wooden pallet and stretch wrapped, 700 kg Octabin.

SAFETY

The product is not classified as a hazardous preparation. Dust and fines from the product carry a risk of dust explosion. All equipment should be properly earthed. Inhalation of dust should be avoided as it may cause irritation of the respiratory system. Small amounts of fumes might be generated during processing of the product. Proper ventilation is therefore required.

Please refer to our MSDS for details on various aspects of safety, recovery, disposal and handling of the product.

We offer our Technical Services for further information and suggestion in using the product from the beginning and also for any need during the course of the product use.

RECYCLING

The product is suitable for recycling using various methods of shredding and cleaning in-house production waste should be kept clean to facilitate direct recycling.

Disclaimer:

The information contained herein may include typical properties and processing parameters of the grade or its typical performances when used in respective applications. The values given above are based on analysis of representative samples and not the actual product supplied. It is the customer's responsibility to inspect and test our grades in order to satisfy itself as to the suitability of the products for the customer's particular application. The customer is solely responsible for all determinations regarding any use of material or product and any process in its area of interest. BLS assumes no obligation or liability for any loss, damage or injury directly or indirectly suffered or incurred as a result of using any of the information or product given in this document. The information and data presented herein is true and accurate to the best of our knowledge. No warranty and/or guarantee expressed or implied, is made regarding performance or otherwise. This information and data may not be considered as a suggestion to use our products without taking into account existing patents, or legal provisions or regulations, whether national or international. The user of any information and/or data is advised to obtain the latest details from any of the offices of the company or its authorized agents, as the information and/or data is subject to change based on the research and development work undertaken by the company.