

TECHNICAL DATA SHEET

(Rev. No. 04, Date: 29.01.2025)

BLS 7777 ORUV

HIGH DENSITY POLYETHYLENE ORANGE UV STABILISED COMPOUND FOR POWER AND TELECOMMUNICATION CABLES

DESCRIPTION

BLS Polymers Ltd. introduces another sophisticated compound for jacketing of MV, HV, EHV Power Cables and Telecommunication Cables – **BLS 7777 ORUV** a bimodal HDPE based ready to use Orange Colored Jacketing Compound totally protected against Ultraviolet degradation and thermal degradation.

This compound is made from specially selected HDPE resin, UV stabilizer and RoHS compliant that provides a balance of toughness, low shrinkage, high moisture barrier, high abrasion resistance, excellent weathering resistance, excellent chemical resistance, high ESCR, heat deformation resistance, low friction for easy pulling during installation, easy processability than conventional compounds. This compound meets the stringent quality requirements for Power and Communication Cables.

SPECIFICATIONS COMPLYING

BLS 7777 ORUV meets the requirements of raw material for manufacturing of Cables as per- ASTM D 1248 Type III, Class D, Category 4, Grade E9, J5, BS 6234: Type H03, TS2, IEC 60502, Type ST7, IEC 60840, Type ST7.

TYPICAL PROPERTIES

PROPERTY	TEST METHOD	UNIT	TYPICAL VALUE
Density	ASTM D 792	gm / cc	0.950
Melt Flow Index (190°C, 2.16 Kg Load)	ASTM D 1238	gm / 10 min	0.5
Tensile Strength	ASTMD 638	Kg / cm ²	285
Elongation at Break	ASTMD 638	%	800
Oven Ageing at 110°C/ 10 days			
Elongation at Break	ASTM D 638	%	>300
Thermal Stress Cracking Resistance	ASTM D 2951	Hours	>96
O.I.T.	ASTMD 3895	Minutes	>70
ESCR (50°C, 10% Igepal, F50, 1000 hrs)	ASTM D-1693	-	No Cracks observed
Moisture Content	ASTM D-817	%	0.02
Dissipation factor tan δ	ASTMD 150	-	0.0005
Volume Resistivity	ASTMD 257	ohm-cm	1 X 10 ¹⁶
Di-electric Constant	ASTM D 150	-	2.35
Dielectric Strength	ASTM D 149	kV/mm	>25
Hardness (1 sec)	ASTM D 2240	Shore D	60
Brittleness temperature (-76°C)	ASTM D 746	-	PASSES
UV Resistance Test (4000 hrs)	ASTM G 154-12A	-	No Cracking & Stickiness

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

- Colours other than Orange like Blue, Green, Yellow, Red, Purple, White, Grey is available on request
- Termite repellent and Rodent repellent version is also available on request
- Others like squirrel, pigeon, snake repellent versions are also available on request.

PROCESSING METHOD

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It is advisable to preheat the **BLS 7777 ORUV** at 80°C for 2-3 hours at the time of use for best results.

BLS 7777 ORUV can be processed in standard PE extruder.

Suggested Temperature Profile

Zone 1	Zone 2	Zone 3	Zone 4	Flange	Head	Die
170±10	180±10	180±10	200±10	200±10	200±10	200±10

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 7777 ORUV 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 7777 ORUV 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.