

## BLS 6666

### LINEAR LOW DENSITY POLYETHYLENE BLACK COMPOUND FOR SHEATHING & JACKETING OF POWER AND COMMUNICATION CABLES

#### DESCRIPTION

BLS Polymers introduces another sophisticated compound for sheathing & jacketing of Power & Telecommunication Cables Grade BLS 6666. This compound is made from specially selected LLDPE resin and carbon black 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 6666 meets the specification requirements of -

ASTM D 1248 Type II Class C Category 4 Grade E4, E5, J3, BS 6234 Type 03C, IEC 60502-1 Type ST 3, ST 7, IEC 60840 type ST3, IEC 60840 Type ST 7.

#### TYPICAL PROPERTIES

| PROPERTY                                 | UNIT                 | TEST METHOD               | TYPICAL VALUE                            |
|--|----------------------|---------------------------|--|
| Density                                  | gm / cc              | ASTM D 1505               | 0.938 ± 0.002                            |
| Melt Flow Index (190°C, Load of 2.16 Kg) | gm / 10 min          | ASTM D 1238               | 0.6 ± 0.1                                |
| Tensile Strength                         | Kg / cm <sup>2</sup> | ASTMD 638                 | 240                                      |
| Elongation at Break                      | %                    | ASTMD 638                 | 850                                      |
| Oven Ageing at 100°C/ 10 days            |                      |                           |  |
| Elongation at Break                      | %                    | ASTM D 638                | >300                                     |
| Carbon Black Content                     | %                    | ASTMD 1603                | 2.4                                      |
| Carbon Back Dispersion                   |                      | BS 2782 Part 823 A&B      |  |
| (a) Rating                               |                      |                           | 3  |
| (b) Uniformity of appearance             |                      |                           | Satisfactory Better than 'A' of figure 1 |
| O.I.T.                                   | Minutes              | ASTM D 3895               | >60                                      |
| ESCR                                     | Hours                | ASTM D-1693 Condition 'B' | >500                                     |
| Moisture Content                         | %                    | ASTM D-817                | 0.02                                     |
| Brittleness Temperature                  | °C                   | ASTM D 746                | >-76                                     |
| Dielectric Strength                      | kV/mm                | ASTM D 149                | >22                                      |

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

#### PROCESSING METHOD

**BLS 6666** For extrusion, standard PE-screws are recommended for excellent surface and high output, but screws designed for PVC can also be used with good result. We recommend that material should be pre-dried at 85±5°C for 2-3 hours for best performance. Recommended processing temperature profile are as below, however, actual

## TECHNICAL DATA SHEET

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temperature profile will depend upon the screw compression ratio, L/D ratio, type of extrusion sleeve and/or pressure.

| Zone 1 | Zone 2 | Zone 3 | Zone 4 | Flange | Head   | Die    |
|--------|--------|--------|--------|--------|--------|--------|
| 160±10 | 170±10 | 180±10 | 190±10 | 200±10 | 200±10 | 200±10 |

To minimize shrink back, hot water (min 60°C) in the first cooling trough is strongly recommended.

## STORAGE & SELF LIFE

**BLS 6666** 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 6666** 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.