BLS POLYMERS LTD.
Excellence in Compounding

TECHNICAL DATA SHEET

(Rev. No. 03, Date: 03.05.2022)

BLS 8888 OFC

HIGH DENSITY POLYETHYLENE BLACK UV STABILISED COMPOUND FOR OPTIC FIBRE COMMUNICATION CABLES

DESCRIPTION

BLS Polymers Ltd. introduces another sophisticated compound for sheathing and jacketing of Optic Fiber Communication Cables – **BLS 8888 OFC** is a HDPE based Black UV Stabilized Compound totally protected against UV degradation and thermal degradation. This compound is made from specially selected HDPE resin, carbon black and is 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.

SPECIFICATIONS COMPLYING

BLS 8888 OFC meets the requirements of raw material for manufacturing of Cables as per - ASTM D 1248 Type III, Class C, Category 4 Grade J4, E8, E9, W8, W9, BS 6234: Type H03C, TEC/GR/TX/ORM-01 Sep -09 Section III with amendment No. 01 dated 28.03.2013 and TEC/GR/TX/ORM-001/05-DEC17.

TYPICAL PROPERTIES

PROPERTY	UNIT	TEST METHOD	TYPICAL VALUE
Density	gm / cc	ASTM D 792	0.953
Melt Flow Index (190°C, Load of 2.16 Kg)	gm / 10 min	ASTM D 1238	0.42
Tensile Strength at Break	Kg / cm^2	ASTMD 638	285
Elongation at Break	%	ASTMD 638	800
Oven Ageing at 100°C/ 10 days			
Retention of Tensile Strength	Kg / mm^2	ASTM D 638	>85%
Retention of Elongation at Break	%	ASTM D 638	>85%
Thermal Stress Cracking Resistance	hours	ASTM D 2951	>96
Carbon Black Content	%	ASTMD 1603	2.5
Carbon Back Dispersion			
(a) Rating		BS 2782 Part 820A	2
(b) Uniformity of appearance			Satisfactory Better than 'A' of figure 1
O.I.T.	Minutes	ASTMD 3895	>70
ESCR,10% Igepal, 50°C for 2000 hrs.		ASTM D-1693	No Cracks observed
Moisture Content	%	ASTM D-817	0.02
Hardness (1 sec)	Shore D	ASTM D 2240	62±1

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PROPERTY	UNIT	TEST METHOD	TYPICAL VALUE
Volume Resistivity	ohm-cm	ASTMD 257	>1 X 10^15
Di-electric Constant		ASTM D 150	2.3
Dielectric Strength	kV/mm	ASTM D 149	>23
Dissipation Factor		ASTM 150	0.0004
Absorption Coefficient @ 400 nm	kAB/m	ASTM D 3349	> 400
Brittleness Temperature, <-76°C		ASTM D 746	PASSES
UV Resistance Test for 4000 hours	Hour	ASTM 154-12 A	No cracking & Stickiness

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

BLS 8888 OFC is available with termite and rodent repellant and also with combination of termite repellant and rodent repellant having the same properties of BLS 8888 OFC but with the additional termite, rodent or combination of termite and rodent repellant and sold under Grade name BLS 8888 OFC AT, BLS 8888 OFC AR and BLS 8888 OFC ATAR respectively.

PROCESSING

We recommend that material **BLS 8888 OFC** is pre-dried at 80^0 C for 4 hours for best performance.
It 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	190±10	200±10	205±10	210±10	220±10

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

Air gap should be adjusted for maintaining low shrinkage

with minimum draw down ratio between1:1.2 for pressure tooling.

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

PACKING

BLS 8888 OFC is available in 25 kg moisture proof bags, 700 kg Jumbo bags, 700 kg Octabin.

STORAGE & SELF LIFE

BLS 8888 OFC must be stored in ambient temperature (not exceeding 50^{0}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.

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.