Technical Datasheet

Black HDPE Compound for Jacketing

EL-Lene™ H2001WC

Product Description

EL-Lene H2001WC is a black bimodal high density polyethylene compound for jacketing in fiber optic and power cable applications. It contains well-dispersed carbon black of nominal particle size less than 20 nanometer to provide excellent weathering resistance and UV resistance.

Typical Application

- Jacketing of fiber optical cables
- Jacketing of power cables

Product Characteristics

- Excellent ESCR
- High Mechanical Properties
- High Speed Extrusion

International specification

- ASTM D 1248 Type III, Class C, Category 5, Grade J5, E9, W8 *
- ISO 1872-PE, KCHL, 50-D001 *
- BS 6234 : Type H03C, TS2 *
- IEC 60502, IEC 60840 **
- IEC 60708, IEC 60794 **

* EL-Lene H2001WC meets the following raw materials specifications.

** Cable jacketed with EL-Lene H2001WC using sound commercial extrusion practices and testing procedures, should meet the following cable specifications.

Physical properties

Property	Test Method	Value	Unit
Melt Flow Rate	ASTM D 1238 @ 190°C, 2.16 kg	0.13	g /10 min
Density (Base resin)	ASTM D 1505	0.952	g / cm ^{3}
Density (Compound)	ASTM D 1505	0.963	g / cm ^{3}
Tensile Strength at Yield	ASTM D 638 @ Crosshead speed 50 mm/min	24	MPa
Tensile Strength at Break	ASTM D 638 @ Crosshead speed 50 mm/min	34	MPa
Elongation at Break	ASTM D 638 @ Crosshead speed 50 mm/min	840	%
Flexural Modulus	ASTM D 790	1000	MPa
Notched Izod Impact	ASTM D 256 @ 23°C	21	kg .cm/cm
Hardness	ASTM D 2240	63	Shore D
ESCR (50°C, 25% Igapal, F0)	ASTM D 1693	>10,000	hrs
Brittleness Temperature	ASTM D 746	<-75	°C
Carbon Black Content	ASTM D 4218	2.5	% wt
Oxidation Induction Time	ASTM D 3895 @ 200°C	>70	min
Dielectric Constant, 1 MHz	ASTM D 1531	2.564	-
Dissipation Factor, 1 MHz	ASTM D 1531	0.005	-
DC Volume Resistivity	ASTM D 257	10 ^{16}	ohm.cm
Dielectric Strength	ASTM D 149	20	kV/mm

Processing Guidelines

For extrusion of EL-Lene H2001WC, it is recommended to use with the screw giving good homogenisation without excessive shear. Standard PE screws have proven satisfactorily which provide good results. EL-Lene H2001WC, as normal carbon black compound product, is recommended to have proper drying before using in order to acquire good product performance. For normal extrusion equipments, recommended melt temperature is 190 - 220°C and suitable drying condition is 80 - 95°C for 1 - 2 hours.

Product Technical Assistance

For technical assistance or further information on this product or any other SCG Chemicals' products, please contact your SCG Chemicals technical service at the address or telephone number as specified below.

Product Available Form

- Black pellet

Product Packaging

- 25 kg loose bag, 25 kg bag on pallet
- 750 kg big bag

SCG Plastics Company Limited / SCG Performance Chemicals Company Limited

Storage

- Store in original container in tidy according to the manual of Handling and Storage from Thai Polyethylene Company Limited/ Thai Polypropylene Company Limited.
- Product(s) should be stored in dry and dust free location at temperature below 50^{o}C and protected from direct sunlight and/or heat, well-ventilated area, away from incompatible materials and food and drink, as this may lead to quality deterioration, which results in odour generation and colour changes and can have negative effects on the physical properties of this product.
- Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.
- The storage area should be stable and not be slopped.