Technical Data Sheet

Product Name
SCGC™ HDPE

Product Type
Black HDPE Compound for Cable Jacketing

Product Grade
H624WC

Product Description

SCGC™ HDPE H624WC is a black bimodal high-density polyethylene compound for jacketing of fiber optic and power cable applications. Its MFR and density are outer the traditional range which provide better processability, and also contains appropriate level of additives and well-dispersed carbon black to ensure excellent weathering and UV resistance.

Typical Application

- Jacketing of fiber optic cables
- Jacketing of power cables

Product Characteristics

- Excellent extrusion speed
- Good surface appearance
- Good mechanical properties

International Compliance

- ASTM D 1248 Type III Class C, category 4, Grade J4, E9, W8*
- ISO 1872 - PE, KCHL, 50 - D006*
- BS 6234: Type H03C, TS2*
- IEC 60708, IEC 60794**
- IEC 60502 (ST3, ST7), IEC 60840 (ST3, ST7), IEC 62067 (ST7)**

*SCGC HDPE H624WC meets the following raw materials specifications.

**Cable jacketed with SCGC HDPE H624WC using sound commercial extrusion practices and testing procedures, should meet the following cable specification.

Physical Properties

Properties	Test Method	Typical Value	Unit
Melt Flow Rate at 190 °C and 2.16 kg	ASTM D 1238	0.64	g/10 min
Density (Compound)	ASTM D 1505	0.960	g/cm³
Tensile Strength at Yield (50 mm/min)	ASTM D 638	21	MPa
Tensile Strength at Break (50 mm/min)	ASTM D 638	31	MPa
Elongation at Break (50 mm/min)	ASTM D 638	> 800	%
Flexural Modulus	ASTM D 790	770	MPa
Hardness (Shore D)	ASTM D 2240	60	
Carbon black content	ASTM D 4218	2.5	%wt
Carbon black dispersion (Rating)	ISO 18553	≤ 3	Rating
Oxidative induction time at 200°C	ASTM D 3895	> 90	min
ESCR (Method B, 10% Igepal, 50 °C)	ASTM D 1693	> 10,000	Hours, F0
Electrical Properties			
Dielectric Constant, 1 MHz	ASTM D 1531	2.3	-
Dissipation Factor, 1 MHz	ASTM D 1531	0.0008	-
DC Volume Resistivity	ASTM D 257	10^16	Ohm.cm
Dielectric Strength	ASTM D 149	> 30	kV/mm

Note: ● The given values are typical value measured on the product. Values herein are not to be constructed as a product specification.

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Processing Guidelines

For extrusion of SCGC HDPE H624WC, It is recommended to use with the screw giving good homogenization without excessive shear. Standard PE screws have proven satisfactorily which provide good result. SCGC HDPE H624WC is recommended to have proper drying before using in order to acquire good product performance.

Recommended melt temperature is 180-200 ˚C (up to 220 ˚C when running at line speed more than 120 m/min).

If preheating and/or drying is used, the suitable condition is 80-90 ˚C for 1-2 hours.

Product Technical Assistance

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

Product Available Form

- Black pellet

Product Packaging

- 25 kg loose bag
- 750 kg big bag
- 25 kg bag on pallet (palletized wrap)

Storage

- Store in original container in tidy according to the manual of Handling and Storage from Thai Polyethylene Co., Ltd.
- Product(s) should be stored in dry and dust free location at temperature below 50 °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.