Technical Data Sheet

Product Name
SCGC™ HDPE

Product Type
Black HDPE Compound for Cable Jacketing

Product Grade
H2001WC

Product Description

SCGC™ HDPE H2001WC is a black bimodal high-density polyethylene compound for jacketing of fiber optic and power cable applications. It 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 ESCR
- Excellent mechanical properties
- High extrusion speed

International Compliance

- 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 (ST3, ST7), IEC 60840 (ST3, ST7)**
- IEC 60708, IEC 60794**
- TEC/GR/TX/ORM-001/05/DEC-17 Section -III by CACT under BSNL

*SCGC HDPE H2001WC meets the following raw materials specifications

**Cable jacketed with SCGC HDPE H2001WC 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	0.15	g/10 min
Density (Base resin)	ASTM D 1505	0.949	g/cm³
Density (Compound)	ASTM D 1505	0.960	g/cm³
Tensile Strength at Break (50 mm/min)	ASTM D 638	33	MPa
Elongation at Break (50 mm/min)	ASTM D 638	> 800	%
Flexural Modulus	ASTM D 790	800	MPa
Hardness (Shore D)	ASTM D 2240	62	
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	0.00058	-
DC Volume Resistivity	ASTM D 257	10^17	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.

Thai Polyethylene Co., Ltd.
1 Siam Cement Road, Bangsue, Bangkok, 10800 Thailand
E-mail: wire&cable@scg.com

Manufacturer website: https://www.scgchemicals.com/en

Technical Data Sheet	Product Name SCGC™ HDPE
Product Type **Black HDPE Compound for Cable Jacketing**	Product Grade H2001WC

Processing Guidelines

For extrusion of SCGC HDPE H2001WC, 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 H2001WC is recommended to have proper drying before using in order to acquire good product performance.

Recommended melt temperature is 190-230 °C.

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
- 25 kg stretch wrap palletized
- 750 kg big bag

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.

Safety

- The product is not classified as a hazardous material.
- Please see our Material Safety Data Sheet for details on various aspects of safety, recovery, and disposal of the products; for more information, contact your SCG Chemicals technical services.

Thai Polyethylene Co., Ltd.
1 Siam Cement Road, Bangsue, Bangkok, 10800 Thailand
E-mail: wire&cable@scg.com

Manufacturer website: https://www.scgchemicals.com/en

Technical Data Sheet	Product Name SCGC™ HDPE
Product Type **Black HDPE Compound for Cable Jacketing**	Product Grade **H2001WC**

Recycling

- The product is suitable for recycling using modern methods of shredding and cleaning. In-house production waste should be kept clean to facilitate direct recycling.
- Please see our Material Safety Datasheet for details on various aspects of safety, recovery and disposal of the products; for more information, contact your SCG Chemicals technical services.

Related Documents

- The latest version of this document will be available at our website, www.scgchemicals.com, or can be obtained from the SCG Chemicals technical services.
- The following related documents are available on request, and represent various aspects on the usability, safety, recovery and disposal of the product.
  - Safety Data Sheet
  - Declaration of Compliance

Disclaimer

- The Applications specified herein is for reference only.
- It is customer's responsibilities to inspect and test the product for suitability of the customer's own use and purpose. The customer is responsible for appropriate, safe, legal use, processing and handling of the product.
- To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication. We however do not assume any liability whatsoever for the accuracy and completeness of the information contained herein.
- We make no warranties which extend beyond the description herein. Nothing herein shall constitute any implied warranty of merchantability or fitness for a particular purpose.
- No liability can be accepted in respect of the use of the product in conjunction with other materials. The information contained herein relates exclusively to the product when it is not used in conjunction with any third party's materials.

Thai Polyethylene Co., Ltd.
1 Siam Cement Road, Bangsue, Bangkok, 10800 Thailand
E-mail: wire&cable@scg.com

Manufacturer website: https://www.scgchemicals.com/en