# TECHNICAL DATA SHEET

Product Name
**SCG HDPE**

Product Type
**Black HDPE Compound for Cable Jacketing**

Product Grade
**H2001WC**

## Product Description

SCG HDPE H2001WC is a black bimodal high density polyethylene compound for jacketing in fiber optic and power cable applications. It contains well-dispersed carbon black to provide 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

- 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**

*SCG HDPE H2001WC meets the following raw materials specifications

**Cable jacketed with SCG HDPE H2001WC using sound commercial extrusion practices and testing procedures, should meet the following cable specification.

## Physical Properties

| Property | Test Method | Typical Value | Unit |
|---|---|---|---|
| Melt Flow Rate | ASTM D 1238 @ 190 °C, 2.16 kg | 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 Yield | ASTM D 638 @ speed 50 mm/min | 24 | MPa |
| Tensile Strength at Break | ASTM D 638 @ speed 50 mm/min | 34 | MPa |
| Elongation at Break | ASTM D 638 @ speed 50 mm/min | >800 | % |
| Hardness | ASTM D 2240 | 63 | Shore D |
| ESCR (50°C, 25% Igepal, F0) | ASTM D 1693 | >10,000 | Hrs |
| Carbon Black Content | ASTM D 4218 | 2.5 | %wt |
| Oxidation Induction Time | ASTM D 3895 @ 210 °C | >40 | 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 D149 | 20 | 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 SCG 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. SCG 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 80-95 ˚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 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

## 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°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.
- SCG would not give warranty to bad storage conditions lead to quality deterioration and inadequate product performance. It is advisable to process PE compound within 6 months after delivery.

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Product Type

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## 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 Plastics/SCG Performance Chemicals technical service.

## 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 Plastics/SCG Performance Chemicals technical service.

## Related

- The latest version of this document will be available at our website, www.scgchemicals.com, or can be obtained from the SCG Plastics/SCG Performance Chemicals technical service.
- The following related documents are available on request, and represent various aspects on the usability, safety, recovery and disposal of the product.
    - Material Safety Datasheet
    - Statement on compliance to food contact regulations

## 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.