



TECHNICAL DATA SHEET

Product Type

Black MDPE Compound for Cable Jacketing

Product Name

SCG MDPE

Product Grade

M545WC

Product Description

SCG MDPE M545WC is a black medium density polyethylene compound for jacketing in power cable and communication cable applications. It contains well-dispersed carbon black to provide excellent weathering resistance and UV resistance.

Typical Application

- Jacketing of power cables
- Jacketing of fiber optic cables

Product Characteristics

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

International

- ASTM D 1248 Type III, Class C, Category 4, Grade J4, E8, E9*
- BS 6234 : Type H03C, TS2*
- ISO 1872 – PE, KLC, 40 – D006*
- IEC 60502, ST7**

*SCG MDPE M545WC meets the following raw materials specifications

**Cable jacketed with SCG MDPE M545WC 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	0.7	g/10 min
Density (Base resin)	ASTM D 1505	0.936	g/cm ³
Density (Compound)	ASTM D 1505	0.946	g/cm ³
Tensile Strength at Break	ASTM D 638 @ speed 50 mm/min	28	MPa
Elongation at Break	ASTM D 638 @ speed 50 mm/min	>800	%
Flexural Modulus	ASTM D 790	600	MPa
Hardness	ASTM D 2240	58	Shore D
ESCR (50°C, 10% Igepal, F0)	ASTM D 1693	>1,000	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	2.00	-
Dissipation Factor, 1 MHz	ASTM D 1531	0.0005	-
DC Volume Resistivity	ASTM D 257	10 ¹⁶	ohm.cm
Dielectric Strength	ASTM D149	40	kV/mm

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



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Processing Guidelines

For extrusion of SCG MDPE M545WC, 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 MDPE M545WC 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
- 25 kg loose bag
- 25 kg bag on pallet
- 750 kg big bag

Product Packaging

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 sloped.
- 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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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.