



Technical Data Sheet

Product Name
SCGC™ HDPE

Product Type
Natural HDPE for Solid Insulation

Product Grade
H512W

Product Description

SCGC HDPE H512W is a high density polyethylene for solid insulation in cable application. It is also suitable for outer skin in “foam-skin” constructions. It provides good performance across the full range of telecommunication insulation applications, including aircore and petroleum jelly filled cable designs in both buried and aerial environments.

Typical Application

- Solid insulation of communication cable

Product Characteristics

- Long-term insulation stability performance
- Good mechanical properties
- High extrusion speed

International Compliance

- ASTM D 1248 Type III, Class A, Category 3, Grade E8, E9*
- ISO 1872 – PE, KHKN, 50 – D006*

*SCGC HDPE H512W for insulation meets the following raw materials specifications

Physical Properties

Properties	Test Method	Typical Value	Unit
Melt Flow Rate	ASTM D 1238 @ 190 °C, 2.16 kg	1.1	g/ 10 min
Density	ASTM D 1505	0.953	g/cm ³
Tensile Strength at Break	ASTM D 638 @ speed 50 mm/min	29	MPa
Elongation at Break	ASTM D 638 @ speed 50 mm/min	>800	%
Hardness (Shore D)	ASTM D 2240	62	-
ESCR	ASTM D 1693 (Method B, Compression Molded, 10% Igepal, 50 °C)	>1,000	Hours, F ₀
Electrical Properties			
Dielectric Constant, 1 MHz	ASTM D 1531	2.1	-
Dissipation Factor, 1 MHz	ASTM D 1531	0.00051	-
DC Volume Resistivity	ASTM D 257	10 ¹⁷	ohm.cm
Dielectric Strength	ASTM D 149	>40	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 H512W, it is recommended to use with the screw giving good homogenization without excessive shear. Standard PE screws have proven satisfactorily which provide good result.

Recommended melt temperature is 220-280 °C using conductor preheats ranging from 110-140 °C.

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

- Natural 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.
- 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.

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