

Product Description

EL-Lene H511W 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

- Insulation of communication cables

Product Characteristics

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

International Compliance

- ASTM D 1248 Type III, Class A, Category 4, Grade E8, E9*
- ISO 1872-PE, KHKN, 45-D006*
- BS 6234 : Type H03*
- IEC 60708**
- ICEA S-85-625**

* EL-Lene H511W meets the following raw materials specifications.

** Cable insulated with EL-Lene H511W using sound commercial extrusion practices and testing procedures, should meet the following cable specifications

Physical Properties

Property	Test Method	Typical Value	Unit
Melt Flow Rate	ASTM D 1238 @ 190°C, 2.16 kg	0.9	g/10 min
Density	ASTM D 1505	0.949	g/cm ³
Tensile Strength at Yield	ASTM D 638 @ Crosshead speed 50 mm/min	23	MPa
Tensile Strength at Break	ASTM D 638 @ Crosshead speed 50 mm/min	34	MPa
Elongation at Break	ASTM D 638 @ Crosshead speed 50 mm/min	>600	%
Flexural Modulus	ASTM D 790	>800	MPa
Notched Izod Impact Strength	ASTM D 256 @ 23°C	14	kg.cm/cm
Hardness	ASTM D 2240	62	Shore D
ESCR (50°C, 10% Igapal, F0)	ASTM D 1693	>168	hrs
Brittleness Temperature	ASTM D 746	<-75	°C
Carbon Black Content	ASTM D 4218	2.5	%wt
Oxidation Induction Time	ASTM D 3895 @ 200°C	>100	min
Dielectric Constant, 1 MHz	ASTM D 1531	2.32	-
Dissipation Factor, 1 MHz	ASTM D 1531	0.00006	-
DC Volume Resistivity	ASTM D 257	10 ¹⁶	ohm.cm
Dielectric Strength	ASTM D 149	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.

Processing Guidelines

For extrusion of EL-Lene H511W, it is recommended to use with the screw giving good homogenization without excessive shear. Standard PE screws have proven satisfactorily which provide good results. For normal extrusion equipment, 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, please contact your SCG Performance Chemicals' technical service at the address or telephone number 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 odor generation and color 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 unlabeled 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 Safety Data Sheet for details on various aspects of safety, recovery, and disposal of the products; for more information, contact your 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 Safety Data Sheet for details on various aspects of safety, recovery and disposal of the products; for more information, contact your SCG Performance Chemicals' technical service.

Related Documents

- The latest version of this document will be available at our website, www.scgchemicals.co.th, or can be obtained from the 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.
 - Safety Data Sheet (SDS)

Disclaimer

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