Technical Datasheet

PE 100 Black HDPE Compound

EL-Lene™ H1000PC

Product Description

EL-Lene H1000PC is a black, bimodal technology, high density polyethylene compound classified as a MRS 10.0 material (PE100) providing superior in mechanical properties and processablity. EL-Lene H1000PC also shows excellent resistance to rapid crack propagation and slow crack growth. In addition, It includes a good dispersion of carbon black pigment and anti-oxidant to ensure excellent long term in UV resistance and thermal stability.

Typical Application

- Potable water pipes
- Gas pipes
- Drainage pipes
- Sewerage pipes
- Industrial pipes
- Corrugated pipes

Product Characteristics

- Good processing
- Excellent thermal stability
- High resistance to slow crack growth
- Resistance to rapid crack propagation
- Low sagging

International specification

- PE 100+ Association
- PIPA, Australia
- INSTA-CERT Mark, Sweden
- NF Mark, France
- SIRIM, Malaysia
- AENOR, Spain
- Belgaqua, Belgium
- TISI, Thailand

Physical properties

Property	Test Method	Value	Unit
Melt Flow Rate	ISO 1133 @ 190^{o}C, 5.0 kg	0.25	g /10 min
Density (Compound)	ISO 1183	0.959	g / cm ^{3}
Tensile Strength at Yield	ISO 527 @ Crosshead speed 100 mm/min	23	MPa
Tensile Strength at Break	ISO 527 @ Crosshead speed 100 mm/min	> 30	MPa
Elongation at Break	ISO 527 @ Crosshead speed 100 mm/min	> 600	%
Carbon Black Content	ISO 6964	2.25	% wt
Carbon Black Dispersion	ISO 18553	≤ 3	-
Oxidative induction time	NF EN 728 @ 200^{o}C	≥ 60	min.
Flexural Modulus	ASTM D 790	1,000	MPa
Hardness	ASTM D 2240	64	Shore D
ESCR	ASTM D 1693	>10,000	Hrs, F_0
Resistance to slow crack growth	ISO 13479 @ 80^{o}C	> 500	Hrs
Rapid crack propagation	ISO 13477	≥ 10	bar
Resistance to gas constituents	ISO 1167	> 20	Hrs

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

Processing Guidelines

Processing of EL-Lene H1000PC will depend on equipment used, size and wall thickness of the pipe produced. In general, melt temperature should be in the range of 200 - 220 °C. Drying before use at 80 - 90 °C for 1-2 hour is recommended.

Product Technical Assistance

For technical assistance or further information on this product or any other SCG Chemicals' products, please contact your technical service or at the email address, pipe_products@scg.co.th. The address or telephone number are specified below.

Product Available Form

- Black pellet

Product Packaging

- 25 kg loose bag
- 750 kg big bag or Sea bulk

SCG Plastics Company Limited / SCG Performance Chemicals Company Limited

1 Siam Cement Road, Bangsue, Bangkok, 10800 Thailand.

Tel. +66 2586 2922, +66 25863675, +66 25865511 Fax +66 25863676

www.chemicals.scg.co.th

Rev. Aug'13 Valid until next revision

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^{o}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 Plastics/SCG Performance Chemicals technical service.

Recycling

- The product is suitable for reclycling using modern methods of shredding and cleaning. In-house production waste should be kept clean to facilitate direct recycling.
- 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.

Related Documents

- The lastest version of this document will be available at our website, www.chemicals.scg.co.th, 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 Data Sheet

Disclaimer

- The product can be used only for the application as specified hereabove.
- 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.

For technical assistance or further information on this product or any other SCG Chemicals' products, please contact your SCG Chemicals technical service at the address or telephone number as specified below.

EL-Lene™ EL-Pro™ EL-Wax™ MARVEL™ are registered trademarks of SCG Chemicals, Thailand.

SCG Plastics Company Limited / SCG Performance Chemicals Company Limited
1 Siam Cement Road, Bangsue, Bangkok, 10800 Thailand.
Tel. +66 2586 2922, +66 25863675, +66 25865511 Fax +66 25863676
www.chemicals.scg.co.th