



## TECHNICAL DATA SHEET

Product Name

**SCG HDPE**

Product Type

**PE112 Black HDPE Compound**

Product Grade

**H112PC**

### Product Description

SCG HDPE H112PC is a black high density polyethylene compound producing from high selective catalyst in the precise process control system, bimodal technology. SCG HDPE H112PC is classified as a MRS 11.2 material (PE112). It provide superior long - term hydrostatic strength balancing with high slow crack growth and rapid crack propagation resistance. It has been designed for better safety factor in long-term use. Besides that, it can be produced in all range of pipe diameters, especially recommended for the production of very thick wall and large diameter pipe.

### Typical Application

- Drinking Water Pipes
- Gas Pipes
- Industrial Pipes
- Slurry Pipes

### Product Characteristics

- Excellent long term pressure resistance
- High resistance to slow crack growth
- Resistance to rapid crack propagation
- Excellent sagging resistance for very thick wall and large diameter pipe production

### Physical Properties

| Property                        | Test Method                          | Typical Value | Unit              |
|---------------------------------|--------------------------------------|---------------|-------------------|
| Melt Flow Rate                  | ISO 1133 @190 °C, 5.0 kg             | 0.20          | g/10 min          |
| Density (Compound)              | ISO 1183                             | 0.960         | g/cm <sup>3</sup> |
| Tensile Strength at Yield       | ISO 527 @ Crosshead speed 100 mm/min | 24            | 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 Dispersion         | ISO 18553                            | < 3           | -                 |
| Carbon Black Content            | ISO 6964                             | 2.25          | % wt              |
| Oxidative Induction Time        | ISO 11357 @ 210 °C                   | ≥ 50          | min               |
| Flexural Modulus                | ASTM D790                            | 1000          | MPa               |
| MRS Classification              | ISO 12162/ISO 9080                   | 11.2          | MPa               |
| Resistance to Slow Crack Growth | ISO 13479 @ 80 °C                    | > 1,000       | Hrs               |
| Rapid Crack Propagation         | ISO 13477, Pc, S4                    | > 10          | bar               |
| Resistance to Gas Constituents  | ISO 1167                             | > 25          | Hrs               |

**Note:** Conversion factor for changing unit from kg/cm<sup>2</sup> to MPa is divided by 10.20



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### Processing Guidelines

For extrusion of SCG HDPE H112PC, it is recommended to use a screw giving good melting and mixing without excessive shear. A single or double flight PE screws have proven satisfactory and will be used with good result. For normal extrusion equipment, we suggest a melt temperature of 200 – 220 °C, and drying 80 – 90 °C for 1 - 2 hours before use.

### 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 stretch wrap palletized
- 750 kg big bag
- Sea bulk container

### 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 50oC 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 technical service.



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### 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 technical service.

### Related Documents

- The latest version of this document will be available at our website, [www.scgchemicals.com](http://www.scgchemicals.com) or can be obtained from the 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 regulation.

### 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