



Technical Data Sheet

Product Name
SCGC™ HDPE

Product Type
PE100 High Resist to Crack Black HDPE Compound

Product Grade
H1000PCH

Product Description

SCGC™ HDPE H1000PCH is a black, bimodal technology, high density polyethylene compound. It is classified as a PE100RC material with excellent resistance to crack, following the material requirements of EN1555-1:2021, EN12201-1:2024, ISO4437-1:2024. Besides that, it can be produced in all ranges of pipe diameters especially recommended for no-dig installation method.

Typical Application

- Drinking water pipes
- Gas pipes
- Drainage & sewerage pipes
- Industrial pipes

Product Characteristics

- Excellent resistance to slow crack growth
- Excellent thermal stability
- Easy processability

Physical Properties

Properties	Test Method	Typical Value	Unit
Melt Flow Rate at 190 °C and 5.0 kg	ISO 1133	0.2	g/10 min
Density	ISO 1183	0.960	g/cm ³
Tensile Strength at Yield	ISO 527	24	MPa
Elongation at Break	ISO 527	> 600	%
Carbon black content	ISO 6964	2.25	%wt
Carbon black dispersion (Rating)	ISO 18553	≤ 3	Rating
Oxidative induction time at 210°C	ISO 11357	≥ 40	min
MRS classification	ISO 12162/ISO 9080	10	MPa
Rapid crack propagation Pc, S4	ISO 13477	≥ 10	bar
Strain Hardening Modulus	ISO 18488	58	MPa
Accelerated Notched Pipe Test @80 °C, 2% Arkopal N100	ISO 13479	≥ 300	Hours
Accelerated Full Notch Creep Test @90 °C, 4 MPa, 6.67% Dehyton PL	ISO 16770	≥ 550	Hours
Crack Round Bar @ 12.5 MPa, 23 °C	ISO 18489	≥ 1.5x10 ¹⁶	Cycles

- Note:**
- The given values are typical value measured on the product. Values herein are not to be constructed as a product specification.
 - Conversion factor for changing unit from kg/cm² to MPa is divided by 10.20.

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Processing Guidelines

For extrusion of SCGC HDPE H1000PCH, 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 services at the address 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 Co., Ltd.
- 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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