



Technical Data Sheet

Product Name
SCGC™ HDPE

Product Type
High Density Polyethylene

Product Grade
H5480S

Product Description

SCGC™ HDPE H5480S is a high density polyethylene resin which is recommended for monofilament or flat yarn applications. It is specially designed for extrusion process both with spinneret die and T-die. H5480S offers good balance process ability and mechanical properties such as tenacity and elongation.

Typical Application

- Rope
- Agriculture net or Fishing net
- Sun shading
- Tarpaulin
- Woven sack

Product Characteristics

- Good process ability
- High tenacity
- Good product appearance

International Compliance

- Regulation (EU) No.10/2011
- Directive 2011/65/EU (RoHS)
- Regulation (EC) No.1907/2006 (REACH)
- Directive 94/62 EC on packaging and packaging waste PPWD
- U.S. FDA 21 CFR 177.1520

Physical Properties

| Properties | Test Method | Typical Value | Unit |
|---------------------------|-------------------------------|---------------|--------------------|
| Melt Flow Rate | ASTM D 1238 @ 190 °C, 2.16 kg | 0.8 | g/10 min |
| Density | ASTM D 1505 | 0.952 | g/cm ³ |
| Melting Point | ASTM D 2117 | 131 | °C |
| Vicat Softening Point | ASTM D 1525 | 126 | °C |
| Brittleness Temperature | ASTM D 746 | < -60 | °C |
| Tensile Strength at Yield | ASTM D 638 | 270 | kg/cm ² |
| Tensile Strength at Break | ASTM D 638 | 390 | kg/cm ² |
| Elongation at Break | ASTM D 638 | 1200 | % |
| Flexural Modulus | ASTM D 790 | 10,000 | kg/cm ² |
| Notched Izod Impact | ASTM D 256 @ 23 °C | 167 | J/m |
| ESCR | ASTM D 1693 @ 50 °C | 30 | Hrs, F50 |

Note:

- Conversion factor for changing unit from kg/cm² to MPa is divided by 10.20
- There results above are under SCGC's condition and method from specific sample, should be not used for representative to lot product qualities.

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Processing Guidelines

Recommended processing conditions:

Monofilament: Processing temperature around 200 – 270 °C, Stretching Temperature 95 – 105 °C, Stretching Ratio 8 - 12

Flat yarn: Processing temperature around 190 – 260 °C, Stretching Temperature 100 – 130 °C, Stretching Ratio 5 - 7

However, these conditions are only guideline for actual processing conditions should be adjusted case by case because it depends on machine type, screw configuration, product design and environment.

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

- 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.
- 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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