Technical Data Sheet

Product Name	Product Grade
HDPE	S521B

Product Type: **High Density Polyethylene**

Product Description

SCGC HDPE S521B is an extra high molecular weight high density polyethylene resin produced by SMX™ technology for producing chemical and food containers 20-30 litres and other large blow molding applications by blow molding process. This grade provides excellent combination of stiffness and impact strength with good processability.

Typical Application

- Chemical containers
- Jerrycan
- Modular floating dock pontoon
- Water tank

Product Characteristics

- Excellent chemical resistance
- Good processability
- Good surface appearance
- Good toughness and stiffness

International Compliance

- U.S. FDA 21 CFR 177.1520
- Regulation (EU) No.10/2011
- Packaging and Packaging waste directive 94/62/EC/CONEG

Physical Properties

Properties	Test Method	Typical Value	Unit
Melt Flow Rate at 190 °C and 2.16 kg	ASTM D 1238	0.06	g/10 min
Melt Flow Rate at 190 °C and 21.6 kg	ASTM D 1238	7.50	g/10 min
Density	ASTM D 1505	0.948	g/cm³
Melting Point	ASTM D 2117	132	°C
VICAT Softening Temperature	ASTM D 1525	128	°C
Tensile Strength at Yield	ASTM D 638	220	MPa
Tensile Strength at Break	ASTM D 638	400	kg/cm²
Elongation at Break	ASTM D 638	880	%
Flexural Modulus	ASTM D 790	11500	kg/cm²
Izod Impact Strength at 23°C	ASTM D 256	550	J/m
ESCR @ 50 °C	ASTM D 1693	>1008	hrs, F50, 25% Igepal
Hardness (Shore D)	ASTM D 2240	62	-

Note: • The given values are typical value measured on the product. Values herein are not to be constructed as a product specification.

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Processing Guidelines

The actual extrusion condition depends on type of using machine, size and wall thickness of product required. Generally, melt temperature should be 160-190 °C, blowing pressure is around 6-8 bar. In some cases, enlargement of die and pin diameter (10-30%) may be suggested for increasing parison diameter.

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

- Natural 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.

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 Chemicals technical services.

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 SCG Chemicals technical services.

Related Documents

- The latest version of this document will be available at our website, www.scgchemicals.com, or can be obtained from the SCG Chemicals technical services.
- 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
  - Declaration of Compliance

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.