



TECHNICAL DATA SHEET

Product Type

High Density Polyethylene for Caps and Closure

Product Name

SCG HDPE

Product Grade

H455JA

Product Description

SCG HDPE H455JA is a high density polyethylene resin with good processability, good mechanical property, and excellent organoleptic property. It is particularly designed for injection molding and continuous compression molding of caps and closures for the packaging beverages.

Typical Application

Beverage caps and closures

- Still and mineral water
- Juice and tea
- Hot-filled beverages
- Aseptic beverages

Product Characteristics

- Good processability
- Good mechanical property
- Excellent organoleptic property

International Compliance

- US FDA 21 CFR 177.1520
- Commission Regulation (EU) no. 10/2011

Note: Direct food contact is subjected to the extraction provisions of the regulation on the finished food contact package

Physical Properties

Property	Test Method	Typical Value	Unit
Melt Flow Rate	ASTM D 1238 @ 190°C, 2.16 kg	4.5	g/10 min
Density	ASTM D 1505	0.958	g/cm ³
Tensile Strength at Yield	ASTM D 638 @ Crosshead speed 50 mm/min	280	kg/cm ²
Tensile Strength at Break	ASTM D 638 @ Crosshead speed 50 mm/min	250	kg/cm ²
Elongation at Break	ASTM D 638 @ Crosshead speed 50 mm/min	1,250	%
Flexural Modulus	ASTM D 790	12,500	kg/cm ²
Notched Izod Impact Strength	ASTM D 256 @ 23°C	39	J/m
Hardness (Shore D)	ASTM D 2240	66	-
ESCR	ASTM D1693 @ 50°C (Condition B, Compression Molded, 10% Igepal)	7	Hrs, F ₅₀
Melting Point	ASTM D 2117	132	°C
Heat Deflection Temperature (HDT)	ASTM D 648 @ 4.6 kg/cm ²	84	°C
% Shrinkage (2 mm) MD	TPE Method	2.06	%
% Shrinkage (2 mm) TD	TPE Method	2.11	%

SCG Performance Chemicals Co., Ltd.





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

Processing Guidelines

The actual processing condition depends on each machine type, product size and mold design. Generally, melt temperature should be 190-230°C for injection molding and 160-190°C for continuous compression molding. The exceed melt temperature than 250°C might affect organoleptic property

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

- Block Pellet

Product Packaging

- 25 kg loose bag
- 25 kg stretch wrap palletized
- 750 kg big bag
- Seabulk 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 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 unlabeled containers. Use appropriate containment to avoid environmental contamination.
- The storage area should be stable and not be slopped.

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