# Technical Data Sheet

Product Name
**SCGC™ HDPE**

Product Type
**High Density Polyethylene**

Product Grade
**H5814J**

## Product Description

SCGC™ HDPE H5814J™ is a general purpose high density polyethylene resin suitable for using in injection molding process. This good flow ability grade designed for high productivity with good toughness product.

## Typical Application

- General injection parts
- Household product
- Bottle cap and closure
- Toy

## Product Characteristics

- Good process ability
- Good impact resistance
- Food contact applicable

## International Compliance

- U.S. FDA 21 CFR 177.1520
- Regulation(EU) No.10/2011
- Directive 94/62/EC
- RoHS Directive 2011/65/EU (RoHS 2)
- REACH Regulation (EC) No.1907/2006
- Safety of toys EN 71-3

## Physical Properties

| Properties | Test Method | Typical Value | Unit |
|---|---|---|---|
| Melt Flow Rate | ASTM D 1238 @ 190 °C, 2.16 kg | 14 | g/10 min |
| Density | ASTM D 1505 | 0.958 | g/cm$^3$ |
| Tensile Strength at Yield | ASTM D 638 | 280 | kg/cm$^2$ |
| Tensile Strength at Break | ASTM D 638 | 180 | kg/cm$^2$ |
| Elongation at Break | ASTM D 638 | 620 | % |
| Flexural Modulus | ASTM D 790 | 12,500 | kg/cm$^2$ |
| Notched Izod Impact | ASTM D 256 @ 23°C | 29.4 | J/m |
| Hardness | ASTM D 2240 | 65 | Shore D |
| ESCR | ASTM D 1693 @ 50°C | 2 | hrs, $F_{50}$ |
| | (Condition B, Compression Molded,25% Igepal) | | |
| Melting Point | ASTM D 2117 | 131 | °C |
| Vicat Softening Point | ASTM D 1525 | 122 | °C |
| Heat Deflection Temperature (HDT) | ASTM D 648 @4.6 kg/cm2 | 75 | °C |
| % Shrinkage (2mmt) MD | TPE Method | 1.6 | % |
| TD | TPE Method | 1.77 | % |
| Flammability | UL – 94 | HB | - |

**Note:**

- Conversion factor for changing unit from kg/cm$^2$ to MPa is divided by 10.20
- 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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Manufacturer website: https://www.scgchemicals.com/en

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## Processing Guidelines

The actual processing conditions depend on each machine type, product size, mold design and environment.
Recommended processing conditions:

Melt temperature: 200-250 °C  Mold temperature: 20-60 °C  Injection speed: Fast  Screw speed 40-70 rpm
Pressure: Injection 30-70%,  Packing and Holding 30-50%,  Back 10% of Max. Pressure

**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.

## 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

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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 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