



# TECHNICAL DATA SHEET

Product Name

**SCG LLDPE**

Product Type

**Polyethylene for Rotational Moulding**

Product Grade

**M72**

## Product Description

SCG M72 is a color compound linear-low density polyethylene (LLDPE) for rotational moulding applications. With a high melt flow and a balance of impact strength and processability, this grade is specifically designed for rotational moulding of cooler boxes, exhibiting an excellent surface finish with no pinholing.

## Typical Applications

- Cooler boxes

## Product Characteristics

- Excellent flow for intricate parts
- Superior gloss and surface finish
- No pinholes
- Smooth inside surface
- UV-stabilized (UV4) for indoor / semi-indoor

## International Compliance

- Base resin of M72 meets the requirements of U.S. Food and Drug Administration (FDA) 21 CFR Part 177.1520 Olefin polymers (c) 2.1 for food contact under conditions of use D-G (21 CFR 176.170(c) Table 2), for all food types.
- For compliance of specific colors, please contact our technical service.

## Product Properties

Property	Test Method	Typical Value	Unit
<b>Resin Properties</b>			
Melt Flow Rate	ASTM D 1238 @ 190 °C, 2.16 kg	6.0	g/10 min
Density	ASTM D 1505	0.932	g/cm <sup>3</sup>
Melting Point	ASTM D 2117	125 (257)	°C (°F)
Crystallization Point	ASTM D 2117	113 (235)	°C (°F)
Heat Deflection Temperature	ASTM D 648 @ 0.455 MPa	50 (122)	°C (°F)
Vicat Softening Temperature	ASTM D 1525	108 (226)	°C (°F)
<b>Mechanical Properties</b>			
Tensile Strength-at-Yield	ASTM D 638 @ Speed 50 mm/min	17 (2500)	MPa (psi)
Tensile Strength-at-Break	ASTM D 638 @ Speed 50 mm/min	17 (2500)	MPa (psi)
Elongation-at-Break	ASTM D 638 @ Speed 50 mm/min	800	%
Flexural Modulus	ASTM D 790	570 (82700)	MPa (psi)
ARM Impact Strength @ -40 °C	ARM Method (5.5 mm rotomoulded sample)	25 (101)	J/mm (lb-ft)
Brittleness Temperature	ASTM D 746	< -60 (-76)	°C (°F)

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

SCG Chemicals Co., Ltd.





## TECHNICAL DATA SHEET

Product Name

**SCG LLDPE**

Product Type

**Polyethylene for Rotational Moulding**

Product Grade

**M72**

### Processing Guidelines

Moulding cycles depend on mould materials and its wall thickness, oven temperature, and shot size. Typical oven temperatures should be set between 250 and 300 °C. The recommended PIAT for M72 is about 200 °C but may vary with a color shade.

#### Points of Concerns

- Finishing rotational parts by flaming, using scrap/filler in compound formulation, or dry blending pigment > 0.3% can decrease mechanical properties of rotational parts, which is not recommended.
- M72 is not recommended for parts which exceed 5 mm thickness or 30 min heating.
- PIAT should not exceed 210 °C.
- M72 is not recommended for products used under direct and intense sunlight.

#### Product Technical Assistance

For technical assistance or further information on this product or any other SCG Chemicals' products, please contact your SCG Chemicals technical service at the address or telephone number as specified below.

### Product Available Forms

- Color compound powder

### Product Packaging

- 25 kg loose bag
- 25 kg stretch wrap palletized

### 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 horizontal.

SCG Chemicals Co., Ltd.

