

## Product Description

M735RU is a linear-low density polyethylene (LLDPE) for rotational molding applications. M735RU is a natural color PE resin available in a pellet and powder form. With a high melt flow and a balance of impact strength, stiffness, and processability, this grade is suitable for rotational molding of decorative items, portable containers, and industrial parts.

## Typical Applications

- Decorative items
- LED lamp covers
- Portable containers
- Industrial parts
- Automotive articles

## Product Characteristics

- High melt flow suitable for complex shape
- Superior gloss and surface finish
- Smooth inside surface
- Good rigidity and toughness
- Antioxidant and UV stabilized
- Meet the requirements of U.S.21 CFR F.D.A. regulation Part 177.1520 clauses (C) for food contact use

## Physical Properties

Properties	Test Method	Value*	Unit
<b>Resin Properties</b>			
Melt Index	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, 0.455 MPa	ASTM D 648	58 (136)	°C (°F)
Vicat Softening Temperature	ASTM D 1525	108 (226)	°C (°F)
<b>Mechanical Properties</b>			
Tensile Strength-at-Yield	ASTM D 638 @ Crosshead speed 50 mm/min	17 (2500)	MPa (psi)
Tensile Strength-at-Break	ASTM D 638 @ Crosshead speed 50 mm/min	21 (3100)	MPa (psi)
Elongation-at-Break	ASTM D 790 @ Crosshead speed 2 mm/min	1000	%
Flexural Modulus	ASTM D 790	570 (82700)	MPa (psi)
Surface Hardness	ASTM D 2240	57	Shore D
ARM Impact Strength @ -40 °C	ARM Method (5.5 mm rotomolded sample)	25 (101)	J/mm (lb-ft)
Brittleness Temperature	ASTM D 746	<-60 (-76)	°C (°F)

\*Value quoted are the result of tests on representative natural samples and product supplied in all respects.

## Processing Guidelines

Molding cycles depend on mold 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 M735RU/RUP is about 200 °C.

### Points of Concerns

- Finishing rotational parts by flaming, using scrap/filler in compound formulation, or dryblending pigment > 0.3% can decrease mechanical properties of rotational parts, which is not recommended.
- M735RU/RUP is not recommended for products used under direct and intense sunlight.

### Product Technical Assistance

For technical assistance or further information including other applications, or any other products, please contact Technical service engineer.

## Product Available Form

- M735RU = Natural pellet with medium UV resistance
- M735RUP = Natural powder (35 mesh) with medium UV resistance

\*\* Remark : The natural pellet and powder are slightly yellowish in appearance after molded; therefore, it is recommended to be used as colored parts.

## Product Packaging

- 25 kg loose bag
- 25 kg bag on pallet



**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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