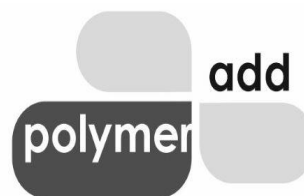


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MICRONISED LLDPE RESIN STRUCTURAL ROTOMOULDED PRODUCTS

1) Identification & Chemical Information

Item	Details
Polymer Type	Linear Low-Density Polyethylene (LLDPE)
Resin Form	Micronised powder (rotational moulding grade)
Typical Melt Flow Rate (MFR)	~6 g/10 min (190 °C / 2.16 kg)
Common Industry / Trade Synonyms	Rotomoulding LLDPE powder; Medium-flow LLDPE rotograde

2) Physical and Chemical Properties

Property	Description
Appearance	White to natural fine powder
Density	~0.935–0.940 g/cm ³
Melting Range	~120–125 °C
Solubility	Insoluble in water
Particle Size Distribution (Micronised Grade)	D50: ~80–150 µm D90: <250 µm D99: <300 µm

3) Application-Specific Technical Discussion

3.1 Specific Benefits

Micronised LLDPE resin with MFR ≈ 6 is selected for structural rotomolded products where balanced flow, uniform sintering, and long-term mechanical stability are required across thick- and thin-wall sections.

- Uniform sintering during rotational moulding cycles
- Balanced melt flow for complex mould geometries
- Good impact strength retention in thick sections
- Stable mechanical performance after long heating cycles

3.2 End Uses

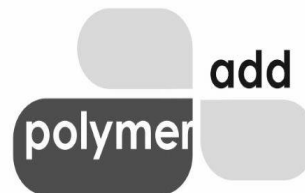
- Water storage and chemical tanks
- Automotive fuel tanks and air ducts
- Industrial bins, containers, and pallets
- Outdoor furniture and playground equipment

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- Agricultural tanks and troughs
- Septic tanks and infrastructure components
- Rotomoulded housings and enclosures

3.3 Key Physical, Chemical & Performance Parameters

- Medium melt flow rate suitable for rotomoulding sintering behaviour
- Linear polymer structure providing balanced toughness and stiffness
- Thermal stability under extended heating cycles
- Resistance to environmental stress cracking
- Micronised powder morphology supporting uniform mould coating

3.4 Known Limitations

- Not optimised for very thin-wall cosmetic mouldings
- Requires UV stabilisation for long-term outdoor exposure
- Impact performance dependent on moulding cycle control

4) Regulatory Note

Regulatory status depends on grade, purity, and intended use. Food-contact and regional compliance listings, where applicable, are addressed in separate regulatory documentation.

5) Disclaimer

Information provided for technical reference only.

No warranty of fitness for a particular purpose.

User responsible for validation, trials, and regulatory compliance.

Creation: January 2026

Next Technical Review: January 2028

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