

LyondellBasell Microthene® MP655662 High Density Polyethylene (Unverified Data**)

Categories: [Polymer](#); [Thermoplastic](#); [Polyethylene \(PE\)](#); [High Density \(HDPE\)](#); [High Density Polyethylene \(HDPE\)](#); [Rotational Molding Grade](#)

Material Notes: Applications
MICROTHENE MP 655-662 is a rotational molding powder that produces items with very smooth inner surface under a wide range of processing conditions. MP 655-662 can be used to make a variety of rotomolded items including light globes, storage containers, traffic crash barriers, ducting and equipment housings. This resin is also available in pellet form as PETROTHENE® GA 655-662.


Processing Techniques
Specific recommendations for processing MP 655-662 can be made only when the required properties, processing equipment and end use are known.

Physical Properties
MP 655-662 exhibits excellent impact strength at both room temperature and -40°F. It also has good warp resistance and stiffness.

This product is from the former Equistar product line.

Vendors: No vendors are listed for this material. Please [click here](#) if you are a supplier and would like information on how to add your listing to this material.

| Physical Properties | Metric | English | Comments |
|---------------------|-------------------------------|--------------------------------|---|
| Density | 0.945 g/cc | 0.0341 lb/in ³ | Compression molded; ASTM D155 |
| ESCR 100% Igepal® | 30 hour @Thickness 3.17 mm | 30 hour @Thickness 0.125 in | Cond. A, CO-630, Rotomolded, F ₅₀ ; ASTM D1693 |
| ESCR 10% Igepal® | 10 hour @Thickness 3.17 mm | 10 hour @Thickness 0.125 in | Cond. A, CO-630, Rotomolded, F ₅₀ ; ASTM D1693 |
| Melt Flow | 5.0 g/10 min | 5.0 g/10 min | Pellets; ASTM D1238 |

| Mechanical Properties | Metric | English | Comments |
|---|---|--|--|
| Tensile Strength, Yield | 20.7 MPa | 3000 psi | 2"/min, Rotomolded; ASTM D638 |
| Flexural Modulus | 0.931 GPa @Thickness 3.17 mm | 135 ksi @Thickness 0.125 in | 1% Secant Modulus, Rotomolded; ASTM D790 |
| Impact Test  | 54.2 J @Thickness 3.17 mm, Temperature -40.0 °C | 40.0 ft-lb @Thickness 0.125 in, Temperature -40.0 °F | Rotomolded; ARM STD |
| | 136 J @Thickness 6.35 mm, Temperature -40.0 °C | 100 ft-lb @Thickness 0.250 in, Temperature -40.0 °F | Rotomolded; ARM STD |

| Thermal Properties | Metric | English | Comments |
|---|-------------------------------|-------------------------------|-----------------------|
| Deflection Temperature at 0.46 MPa (66 psi) | 66.0 °C @Thickness 3.17 mm | 151 °F @Thickness 0.125 in | Rotomolded; ASTM D648 |
| Deflection Temperature at 1.8 MPa (264 psi) | 42.0 °C @Thickness 3.17 mm | 108 °F @Thickness 0.125 in | Rotomolded; ASTM D648 |

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