



RMPP141 GREY 346

RMPP141 Grey 346 is a Polypropylene (PP) Compound specifically developed for rotational moulding, available as ambient ground powder or pellets.

It has excellent mouldability and its enhanced properties allow it to be used in demanding applications for which polyethylene is not the optimum polymer.

FEATURES:

- **An excellent balance of high stiffness & high impact**
- **Good Temperature Resistance (dry & wet)**
- **High FNCT / ESCR and good chemical resistance**
- **Rated > UV12**
- **Excellent long term creep performance**
- **Improved surface hardness and scratch resistance**

PROCESSING GUIDELINES:

- Oven temperature ~ 300°C to achieve mould surface temperature > 245°C
- PIAT 225°C – 230°C
- Rotation similar to LMDPE
- Smartvents will increase pressure inside mould and assist with reducing warpage and minimising pinholes
- PP can stress whiten so minimise impact when demoulding

OBSERVATIONS:

- Lubricity of PP means little or no mould release needed
- Lower shrinkage than PE
- Less warpage for large surfaces due to stiffness and crystallisation
- Complete crystallisation may take up to 72 hours to obtain optimal physical properties
- Heat is critical for sintering PP, so minimise heat sinks in mould

| Properties | Conditions | Units | Nominal Values | Testing Methods |
|---------------------------------|--|-------------------|----------------|-----------------------------------|
| Physical | | | | |
| Melt Flow Rate | 230 ⁰ C/2.16kgs | g/10 min | 11 | ISO 1133 |
| Density ² | | g/cm ³ | 0.900 | ISO 1183 |
| Mechanical & Thermal | | | | |
| Tensile stress ¹ | At yield | MPa | 24 | ISO 527-2 |
| Tensile strain ¹ | % At yield | % | 5 | ISO 527-2 |
| Tensile Modulus ¹ | | MPa | 1250 | ISO 527-2 |
| Flexural Modulus ¹ | | MPa | 1200 | ASTM D790 |
| FNCT ² 2% Ige * | 5MPa @ 50 ⁰ C 6MPa @ 50 ⁰ C | Hours Hours | >300 170 | ISO16770 10x10mm x 1.6mm notch |
| ESCR ¹ | 2% Igepal * | Hours | > 1000 | ASTM D1693 |
| Shore D Hardness ¹ | | | 62 | ASTM D2240 |
| HDT ¹ | 0.455 MPa | Deg C | 115 | ISO 75-2 4mm Edgewise |
| HDT ¹ | 1.82 MPa | Deg C | 62 | |
| ARM Impact ¹ | 23 ⁰ C 6mm | J/mm | 23.5 | ARM Method |
| Poisson Ratio | | | 0.41 | ISO 527-2 |

Notes: ¹ Roto moulded ² Compression moulded * Or equivalent

Important: *The information contained in this document is of a general nature only and is intended to provide an indication of the potential properties and benefits of a particular polypropylene compound. The statistical and other information provided in this document has been determined in laboratory test conditions. Accordingly, there may be differences in performance in a production environment including having regard to the materials used. The information contained in this document should not be used as a sole basis for production or manufacturing purposes. Independent testing verification and independent professional advice should be obtained before making a decision to use any product or to apply any method or process. To the full extent permitted by law, PSD Rotoworx Pty Limited (ACN 166 016 244) ("PSD Rotoworx"), its related entities, their directors and employees: (i) give no warranty or representation that the information contained in this document is accurate and complete in every particular, and (ii) disclaim all liability for reliance on the information contained in this document.*

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