December 2024

RMPP141 NATURAL

RMPP141 is a Polypropylene (PP) Compound specifically developed for rotational moulding, available as ambient ground powder or pellets. Black is also available ex stock.

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

RMPP141 Natural complies with U.S. 21 CFR F.D.A. regulation Part 177.1520 clause (c) (1.1) and (d).

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 ~ 300^0C to achieve mould surface temperature > 245^0C
- PIAT 225^0C – 230^0C
- 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

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Properties	Conditions	Units	Nominal Values	Testing Methods
Physical				
Melt Flow Rate	230^0 C/2.16kgs	g/10 min	13	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 @ 50^0C 6MPa @ 50^0C	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] HDT [1]	0.455 MPa 1.82 MPa	Deg C Deg C	115 62	ISO 75-2 4mm Edgewise
ARM Impact [1]	23^0C 6mm	J/mm	22	ARM Method
ARM Impact [1]	0^0C 6mm	J/mm	8	ARM Method
ARM Impact [1]	-20^0C 6mm	J/mm	6	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) ,Salee Colour Public Company Limited ("PSD Rotoworx/Salee Colour PLC") , 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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