

Plantic® R1

Plantic Technologies Limited develops and produces advanced bio-based materials. Plantic® is an innovative product made from corn-starch (maize) that is Australian grown and non-genetically modified. Plantic® is an Australian registered trademark of Plantic Technologies Limited.



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Physical Properties – Plantic® R1

Property	Test Method	Value	Units
Density (specific gravity)	ASTM D792	1.35 – 1.45	g / cm ³
Vicat Softening Temperature	ASTM D1525	130 – 135	°C
Glass Transition Temperature, Tg	ASTM E1356	40 – 45	°C
Sheet (250um):			
Water Activity	PTM 03	0.5 – 0.65	–
Modulus of Elasticity (MD)	ASTM D882	2200 – 2400	MPa
Tensile Strength (MD)	ASTM D882	42 – 46	MPa
Strain at Break (MD)	ASTM D882	20 – 36	%
Tear Resistance (MD)	ASTM D1922	3.5 – 5.5	N
Linear Mould Shrinkage	ASTM D955	0.01	mm/mm
Coefficient of Friction, static	ASTM D1894	0.215	–
Coefficient of Friction, dynamic	ASTM D1894	0.17	–
MVTR	ASTM E9600	140	g/m ² /24hrs@38°C, 75%RH
OTR	ASTM D1434	<0.01	cc/m ² /24hrs@38°C, 75%RH
Haze	ASTM D1003	15 – 20	
60° Specular Gloss	ASTM D2457	80 – 85	%
Optical Transparency	ASTM D1003	89 – 93	%

Grade

Plantic® R1 is an advanced technology sheet manufactured from corn starch that is fully biodegradable and compostable.

Plantic® R1 is suitable for thermoforming applications (e.g. for packing foods & goods with water activity of 35% to 70%). Also suitable for direct contact with fatty foods.

Roll Handling & Storage

Rolls should be stored in original wrapping in normal warehouse conditions. Avoid extremes in storage environment (Temperature: Min. 5°C – Max. 30°C, RH: Min. 25% - Max. 80%). Product must not get wet. Exposure to sunlight should be avoided. Pallets should not be stacked more than 2 high. Part used rolls should be rewrapped. Refer MSDS & Processing Guidelines.

Recommended Shelf Life (when stored as per Plantic recommendations): Rolls (sheet) 12 months, trays (before packing with goods) 6 months, trays (packaged with goods) 12 months.

Approvals

Certified to EN13432:2000



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