

# 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.



Plantic Technologies Ltd  
51 Burns Road, Altona, Vic 3018 Australia  
Phone +61 3 9353 7900 Fax +61 3 9353 7901  
Email info@plantic.com.au [www.plantic.com.au](http://www.plantic.com.au)

## Physical Properties – Plantic® R1

Property	Test Method	Value	Units
Density (specific gravity)	ASTM D792	1.35 – 1.45	g / cm <sup>3</sup>
Vicat Softening Temperature	ASTM D1525	130 – 135	°C
Glass Transition Temperature, Tg	ASTM E1356	40 – 45	°C
<b>Sheet (250um):</b>			
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	35 – 40	g/m <sup>2</sup> /24hrs@38°C, 50%RH
OTR	ASTM D1434	0.13	cc/m <sup>2</sup> /24hrs@38°C, 50%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



Values quoted reflect tests on samples. The product may not conform in all respects. Plantic does not guarantee this information and makes no representation or warranty, express or implied, regarding this information or its completeness or fitness for any purpose. You must determine the most suitable formulation, production method and control tests to ensure your product complies with all laws and meets your purposes. Subject to rights or remedies which cannot be excluded, restricted or modified arising under the Trade Practices Act (Australia) 1974 or other laws, Plantic will not be liable (including in negligence) for any damage, loss, liability or expense (whether direct or indirect, consequential or incidental) suffered or incurred by anyone in connection with this information. Plantic's liability under such laws is limited, where permissible by law, to replacement of relevant goods or re-supply of relevant services. Plantic may change the product composition without changing the product code or name so please ensure this document is current.