

Clarifoil Thermoform Film Material Data Sheet

Clarifoil thermoform film is based on renewable, sustainably sourced wood pulp and can be safely incinerated yielding carbon dioxide, water and non-toxic inorganic ash. It is therefore the premier choice for environmentally friendly thermoform packaging.

The Clarifoil Thermoform Product Range					
Nominal gauge [µm]	Grade	Nominal Yield [g/m ²]	Roll length [m]	Roll widths [mm]	Roll Weights [kg]
250	TM 24	327 ± 2	400-500	1320 – 1350	170-220
300	TM 24	392 ± 2	350-450	1320 – 1350	200-260
400	TM 24	523 ± 2	250-450	1255 – 1320	150-325
500	TM 24	654 ± 2	180-250	1300 – 1350	150-220

Commercial Tolerances: gauge ± 5%, roll length ± 10%, roll width ± 1.0 mm, yield ± 5%

Finish

Clarifoil thermoform film is supplied in gloss finish.

Colours

Standard film is clear; however Clarifoil can match any colour. Common colours include black, white and red. Manufacture of coloured film is dependent a minimum order quantity of 3 tonnes. Please note that coloured film is not food contact approved.

Other Film Options

Further films are available for specific applications, including flame retardant and UV absorbent. Additionally, other non-standard gauges can be produced, subject to minimum order quantities. Please contact Clarifoil Sales for details on 01332 68 1835.

Typical Material Properties	
General	
Specific gravity	1.31
Surface energy [dyn cm-1]	38 - 42
Residual moisture	≤0.8%
Food contact approved	Yes, Clear and white film only
Sealing techniques	Radio Frequency and Ultra Sonic
Sterilisation techniques	Ethylene oxide, Ozone, Gamma and others
Optical	
Transparency [%] ASTM D1476	89.1
Gloss [%] ASTM D523, BS 2782 520A: 20°, 60°, 85°	137, 143, 116
Haze [%] ASTM D1003, BS 2782 521A	1.3 - 4.5 Thickness specific
Mechanical	
Tensile strength [Nmm ⁻²] ASTM D882	80 - 100
Elongation at break [%] ASTM D882	20 - 40
E-Modulus [Nmm ⁻²] ASTM D882	2000 - 2400
Thermal	
Softening temperature [°C]	127
Glass Transition Temperature [°C]	92

Chemical	
Chemical Resistance ASTM D543 – 87	Low resistance to Ketones, attacked by esters, moderate to concentrated strong acid and bases. Resistant to non-polar solvents.
Barrier	
Moisture Vapour Transfer Rate [MVTR] [g/m ² .day] / [g/100in ² .day]	
250 µm	466.6 / 30.10
400 µm	268.2 / 17.30
500 µm	213.1 / 13.75
Oxygen Transfer rate [OTR][cc/m ² .day] / [cc/100in ² .day]	
250 µm	150.0 / 9.68
400 µm	88.0 / 5.68
500 µm	73.8 / 4.76
Grease	
Grease Resistance	Very good

Please note: All properties are measured after conditioning to 23°C, 50% RH unless otherwise stated.

The values quoted are typical lab results and must not be regarded as a supply specification. For some properties sample preparation will critically affect measured values, e.g. the elongation at break figures above are only achieved if the test specimens are cut to give a very good edge