

Mactac Warranty Bulletin - Expected Durability of Mactac Graphics Films - Australia and New Zealand

General Warranty Statement: Mactac Product Limited Express Warranty

Mactac warrants that the Product will be free from defects in manufacturing and workmanship (as defined below) upon shipment, and when used according to Mactac's written instructions and with other graphic processing materials and equipment, will under normal conditions provide Expected Durability and/or Indoor Durability for the period stated in this Mactac Warranty Bulletin, subject to the Mactac Product Warranty Terms and Conditions 1.0.

"Expected Durability" for the purpose of this warranty means that the Product in a finished graphic situated outdoors, subject to the limitations herein and Mactac Product Data Sheets and Instructional Bulletins, and applied to recommended surfaces, will not deteriorate excessively such as, film discoloration, cracking, crazing, blistering, excessive gloss changes, excessive dimensional change or loss of adhesion or reflectivity (for retro-reflective films), so that the finished graphic is ineffective for its advertising or identification purpose(s) when viewed under normal conditions from the intended viewing distance, due solely to a defect in the Product in manufacturing or workmanship. Expected Durability is based on normal middle European outdoor exposure conditions (Zone 1, Vertical), unless otherwise stated, and application to recommended surfaces. Actual performance life will depend on a variety of factors, including but not limited to substrate preparation, exposure conditions and maintenance of the Product and finished graphic. In case of finished graphics in areas of high temperatures or humidity, in industrially polluted areas or other areas with air laden particulate matter, and/or in high altitudes, Expected Durability will be reduced. Subject to this Mactac Warranty Bulletin, set forth the Expected Durability period in the regional service area of your graphics.

Defect Coverage for Product Defined in this Durability Bulletin

- **Manufacturing & Workmanship Defects.** A failure of the Product to materially conform to the Mactac written manufacturing specifications for the Product.
- **Printing and Ink Defects.** Artefacts or misprints that occur when printing on specified Mactac Product, due solely to a defect in the Product in manufacturing or workmanship.
- **Cutting Defects.** A failure of clean cutting and weeding characteristics when cut as recommended in the applicable Mactac Product Data Sheet and Instructional Bulletins, due solely to a defect in the Product in manufacturing or workmanship.

Printed Graphics

Digital Print Media	Graphic Protection	Unprinted Zone 1	Outdoor Vertical Zone 2	Outdoor Vertical Zone 3	Indoor
Long Term Applications - Compound Curves, Corrugations and Deep Recesses					
JT 10700 Series	Unprotected	10			
	LF 10700 - Gloss		4.5	2.5	6
Medium Term Applications - Flat and Simple Curved					
JT 9700 Series - Opaque / Transparent	Unprotected	7	-	-	-
	LF 9700 UV Series - Gloss and Matte		4	2.5	5
	Permafun - Brushed Metal and Coarse Grain Wood		3.5	2	5
	Permafun - Carbon Clear Pro		2	1	3
JT 9700 WT-PT Matte Translucent	Unprotected	7	-	-	-
	LF 9700 UV Series - Gloss and Matte		4	2	5
JT 9500 Series	Unprotected	5	-	-	-
	LF 9700 UV Series - Gloss and Matte		3.5	2	5
	LF 9500 Series - Gloss and Matt		3	1.5	4
	Permafun - Brushed Metal and Coarse Grain Wood		3.5	2	5
	Permafun - Carbon Clear Pro		2	1	3
Short Term Applications - Flat Surfaces					
JT 8700 Series	Unprotected	4	-	-	-
	LF 8700 Series - Gloss, Satin and Matte		2.5	1.5	3
	LUV 7036 Anti Graffiti		1.5	1	3
JT 8500	Unprotected	3	-	-	-
	LF 8500 Series Gloss and Matte		2	1	2
JT 8300 Dot Series	Unprotected	-	-	-	1
Short Term Applications - Flat Surfaces - Eco Friendly					
JT 5400 Series	Unprotected	2	-	-	-
	LUV 7036		1	0.5	2

All numbers = Durability in years.

Printed Graphics

Digital Print Media		Graphic Protection	Unprinted Zone 1	Outdoor Vertical Zone 2	Outdoor Vertical Zone 3	Indoor
Architectural - Interior/Exterior Wall and Decoration						
WW 100 Pro	Unprotected		3	-	-	-
	Horizon			2	1	3
	LF 10700 UV Series - Gloss & Matt			2	1	3
	Lag 100			2	1	3
WW 300	Unprotected		4	-	-	-
	LF 8700 Series - Gloss, Satin and Matte			2.5	1.5	6
	LUV 7036 Anti Graffiti			2.5	1.5	6
WW Canvas, Veneziano and Leather DecoSilky	Unprotected		1	-	-	3
Architectural - Window Decoration						
JT 5796 BF Frosted, JT 5798 BF Dusted	Unprotected		5	-	-	5

All numbers = Durability in years.

Printed Graphics

		Unprinted Zone 1	Outdoor Vertical Zone 2	Outdoor Vertical Zone 3	Indoor
Digital Print Media	Graphic Protection				

Floor Graphics

JT 9700 Series - Opaque / Transparent	Unprotected	7	-	-	-
	FloorGrip		-	-	1
JT 8700 Series	Unprotected	4	-	-	-
	FloorGrip		-	-	12m
	LUV 6300		-	-	6m
	LUV 6301		-	-	3m
	LUV 6400		-	-	2m
StreetRap	Unprotected	5	-	-	-
	StreetLam		4m	2m	-
	FloorGrip		2m	1m	12m
JT 8300 Dot Floor	Unprotected	-	-	-	1m

Durability in years
m = Durability in Months

Signage Films

	Durability Zone 1	Outdoor Vertical Zone 2	Outdoor Vertical Zone 3	Indoor
Long Term Applications - Flat Surfaces to corrugated surfaces with rivets*				
MACal 9800 Cast Series - Black and White	10	7	4	10
MACal 9800 Cast Series - Colours	8	5	3	8
MACal 9800 Cast Series - Metallics	5	3	2	5
MACal 9800 Cast Series - Clear	5	3	2	5
Medium Term Applications - Flat Surfaces to slightly curved surfaces				
MACal 9800 Pro Series - Black and White	8	5	3	8
MACal 9800 Pro Series - Colours	7	4.5	2.5	7
MACal 9800 Pro Series - Metallics	5	3	2	5
MACal 9800 Pro Series - Clear	5	3	2	5
Short Term Applications - Flat Surfaces*				
MACal 8300 Pro Series - Black and White	5	3	2	5
MACal 8300 Pro Series - Colours	4	2.5	1.5	4
MACal 8300 Pro Series - Metallics	4	2.5	1.5	4
MACal 8300 Pro Series - Clear	4	2.5	1.5	4
MACal 8900 Pro Series - Black and White	4	2.5	1.5	4
MACal 8900 Pro Series - Colours	3	2	1	3
MACal 8900 Pro Series - Metallics	3	2	1	3
MACal 8900 Pro Series - Clear	3	2	1	3
MACal 8200 Pro Series - Black and White	4	2.5	1.5	4
MACal 8200 Pro Series - Colours	3	2	1	3
MACal 8200 Pro Series - Metallics	3	2	1	3
MACal 8200 Pro Series - Clear	3	2	1	3

All numbers = Durability in years.

*MACal 9800 Cast and 8300 Pro are available in Australia only.

*MACal 8900 Pro and 8200 Pro are available in New Zealand only.

Wrapping Films

	Outdoor Vertical Zone 1	Outdoor Horizontal Zone 1	Outdoor Vertical Zone 2	Outdoor Horizontal Zone 2	Outdoor Vertical Zone 3	Outdoor Horizontal Zone 3
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Vehicle Wrapping Applications - Cast 3D Conformable

Mactac ColourWrap Series - Black and White	7	2.5	5	1.5	3	1
Mactac ColourWrap Series - Colours*	7	2.5	5	1.5	3	1
Mactac ColourWrap Series - Metallics	4	1.5	3	1	1.5	0.5

All numbers = Durability in years.

*Note: The expected durability of Gloss Saffron Yellow, Gloss Lemon Yellow, Gloss Yellow and Matte Light Red is equal to the stated Metallics' expected durability.

Where the material is applied in a 'marine environment', graphics must be installed above the mean water line, edge sealer must be used and the stated warranty period will be reduced by 30%.

Speciality Films

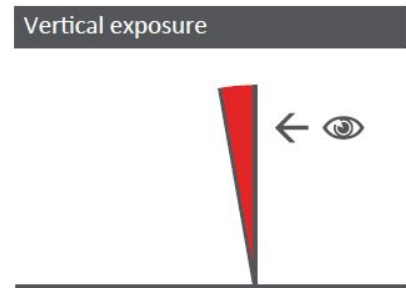
	Durability Zone 1	Outdoor Vertical Zone 2	Outdoor Vertical Zone 3	Indoor
GlassDecor				
MACal Glass Decor 700 Series	5	3.5	2	7
MACal Glass Decor 500 Series	5	3.5	2	7
Architectural - Interior/Exterior Wall and Decoration				
WallChalker	4	2.5	1.5	6
MacPhospho	5	3.5	2	5
Speciality Products				
Permagard Dry Erase PG 7034	-	-	-	2

All numbers = Durability in years.

Exposure Angle Definition

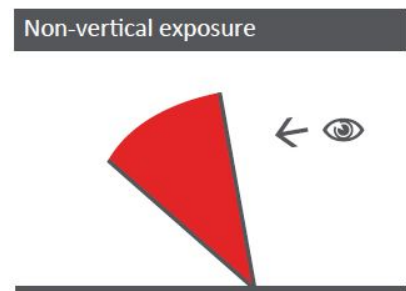
Vertical Exposure

The face of the graphic is $\pm 10^\circ$ from vertical. Expected Durability values stated in this durability bulletin are stated for material installed in a Vertical Exposure.



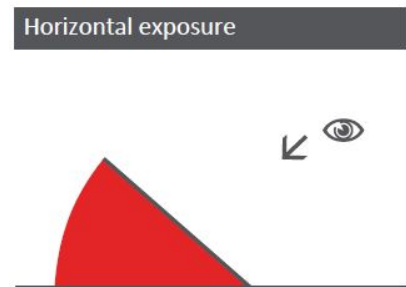
Non-Vertical Exposure

The face of the finished graphic is greater than 10° from vertical and greater than 45° from horizontal. The reduction of durability for non-vertical applications will be 50% less than the stated durability.



Horizontal Exposure

The face of the finished graphic is 45° to 90° from vertical. Horizontal applications are not warranted and do not have any expectations of durability. The exposure of films in the horizontal position invalidates any performance expectations as stated in this durability bulletin. Films may retain legibility, but will not provide published Expected Durability for gloss, colour retention, chalking, dimensional stability and overall aesthetic performance.



Zone System, Australia and New Zealand

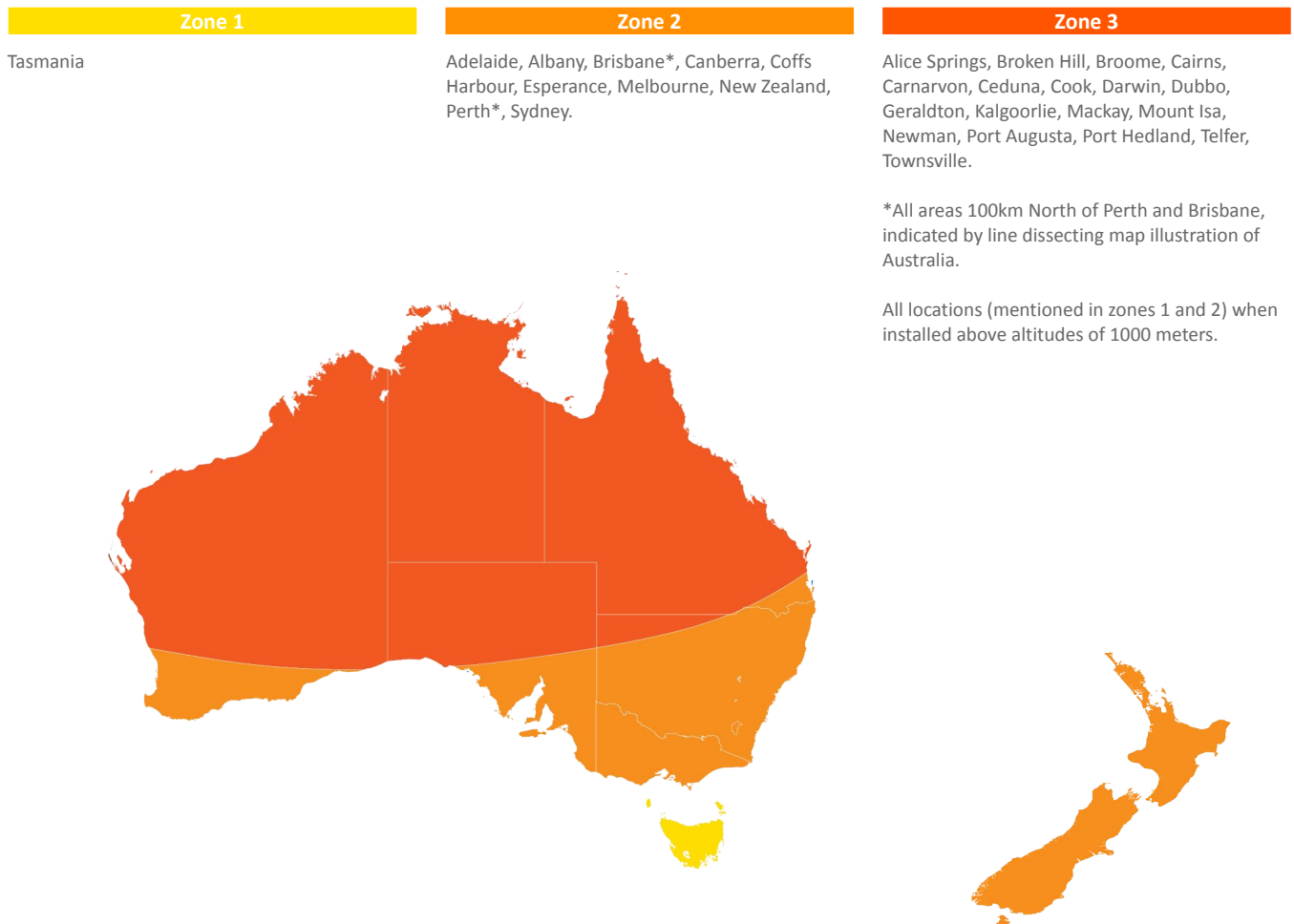
Expected Durabilities stated in this document include reductions for Zone 2 and Zone 3, including Digital Print Media combined with Graphic Protection. Typically films used in regions identified as Zone 2 and Zone 3 will have a reduction of the stated Expected Durability. For example, for films used in Zone 2, the Expected Durability will be 30% less than that stated for Zone 1. For films used in Zone 3 the Expected Durability will be 60% less than that stated for Zone 1.

Zone and Non-Vertical Reduction Examples Australia and New Zealand

Zone 1		Zone 2		Zone 3	
Vertical	Non-vertical	Vertical	Non-vertical	Vertical	Non-vertical
100%	-50% of Zone 1 Vertical	-30% of Zone 1 Vertical	-50% of Zone 2 Vertical	-40% of Zone 2 Vertical	-70% of Zone 2 Vertical
7	3.5	5	2.5	3	1.5
5	2.5	3.5	1.75	2	1
4	2	3	1.5	1.75	.75
3	1.5	2	1	1	-

Values in years

Zone Chart



Additional Information

High Elevations - at higher altitudes, a thinner atmosphere filters less UV radiation. UV exposure is increased compared to sea level. With every 1000 metres increase in altitude, UV levels increase by 10% to 12%.

Congested Urban or Industrial Areas - Due to increased pollutants and particulates in the atmosphere in congested urban and industrial areas, applied graphics will have reduced durability expectations. Horizontal applications in these areas will also further trap the contaminants on the surface of the material, and combined with increased UV exposure will reduce the Expected Durability.

Marine Environments – Material installed in marine environments will have a reduced cumulative Expected Durability of 40% and the applicable Zone reduction, of the stated Zone 1 period in this durability bulletin.

For further information, contact your local Mactac representative.