

MACal® 9800 PRO Serie

PRODUCT DESCRIPTION

MACal 9800 PRO Serie consists of premium polymeric stabilized calendered soft vinyl films designed for trouble-free computer cutting and fast weeding, even for small letters and fine lines. The series includes:

- MACal 9800 PRO with 100 available colors
- MACal 9800 SL PRO, Super Luminous, are intense, vibrant colours for eye-catching markings
- MACal 9800 HT PRO with High Tack adhesive
- MACal 9800 BF PRO with Bubble Free adhesive

Face Material: Polymeric stabilized calendered vinyl, 66 µm thick, cadmium-free.

Adhesive:

- MACal 9800 PRO: high quality clear solvent based permanent acrylic adhesive. A white version of this adhesive is used for MACal 9800 PRO SL.
- MACal 9800 HT PRO: high quality clear solvent based high tack permanent acrylic adhesive
- MACal 9800 BF PRO: high quality clear solvent based micro-structured permanent acrylic adhesive

Liner:

- MACal 9800 PRO, SL and HT: highly stable 135 gsm white kraft paper with Mactac backprinting. For white vinyls the liner is coated with a blue silicone coating to improve the contrast with the film colour.
- MACal 9800 BF PRO: highly stable 145 gsm white kraft paper with grey backprinting.

NB : CONTRAST ensures a clear view during the stripping process therefore improving productivity.

TYPICAL USE

MACal 9800 PRO Serie is designed for long term interior and exterior marking applications (vehicle marking, window graphics, signs...). It provides ideal conformability over simple contours.

The High Tack, HT, adhesive provides excellent adhesion on low energy and difficult substrates such as non-smooth or slightly porous surfaces like painted walls, MDF, industrial equipment, waste containers, etc.

The Bubble Free, BF, adhesive allows faster application onto substrates.

PROCESSING

Computer cutting

Clean, quick, trouble-free cutting with most plotters. Adjustment of the cutting depth is important: if the cut is too deep this could result in the paper splitting and coming away with the adhesive when the vinyl is transferred to Application Tape.

Application

The transfer of the cut vinyl onto the Application Tape should always be performed by removing the liner from the pressure-sensitive material (i.e. with the PVC face downwards onto the working surface) and not by lifting off the Application Tape.

MACal 9800 PRO, HT and BF can be applied with the dry application method on flat or slightly curved surfaces. Wet application is possible only for flat surfaces and only with Macal 9800 PRO and Macal 9800 HT PRO.

Important remark

All surfaces to which the material will be applied must be thoroughly cleaned from dust, grease or any contamination. The compatibility of paints and lacquers should be tested by the end-user, prior to use.

Edge sealing

Where exposure to chemicals and solvent spillage is likely to occur, edge sealing of decals with a varnish will prevent edge lift. Correct varnishing of decals gives greater protection, and extends the use-life against prolonged effects of weathering, abrasion and other effects such as frequent cleanings.

SHELF LIFE

- Macal 9800 PRO: 2 years when stored at 15 to 25°C and ± 50 % relative humidity.
- Macal 9800 HT PRO: 1 year when stored at 15 to 25°C and ± 50 % relative humidity.
- Macal 9800 BF PRO: 2 years when stored at 15 to 25°C and ± 50 % relative humidity.

PHYSICAL PROPERTIES (TYPICAL VALUES)

Average Values Test Method

Thickness (µm) Film + Adhesive

Macal 9800 PRO	90	ISO 534
Macal 9800 SL PRO	100	ISO 534
Macal 9800 HT PRO	106	ISO 534
Macal 9800 BF PRO	94	ISO 534

Face Material data, 23°C (N/15mm)

Tensile Strength	>24	DIN ISO527-3
Elongation at Break (%)	>150	DIN ISO527-3

Adhesive data, 23°C (N/25 mm)

Peel adhesion 180° on mirror stainless steel

	PRO	HT	BF	
20 min. residence	11	19	11	FTM1
24 hour residence	14	23	14	FTM1
1 week residence	13	26	14	FTM1

Dimensional stability

Shrinkage (1 week at 70°C applied on Aluminium)	PRO < 0.2mm	FTM14
	SL < 0.5mm	
	HT < 0.5mm	
	BF < 0.2mm	

Temperature ranges

Minimum application temperature (°C)	+8°C
Service temperature range (°C)	-40°C to +90°C

Flammability

Sample mounted on aluminium	B-s1,d0	EN 13501-1
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Solvent and chemical resistance

Resistance to most:	oils and grease, fuel, aliphatic solvents, weak acids, salts and alkalis
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EXPECTED DURABILITY

Central Europe - Zone 1

Black & white	10 years	ISO 4892-2
Colours	8 years	ISO 4892-2
Metallics	5 years	ISO 4892-2

Note : Exposure to severe temperatures and ultraviolet light, as well as conditions in southern European countries, and also in tropical, sub-tropical or desert regions, will cause a more rapid deterioration. This also applies to polluted areas, high altitude, horizontal and south- facing exposure.

DISCLAIMER

For more information on the durability and exposure please visit the “Mactac Technical Bulletin TB 7.5 Outdoor Durability of Mactac Graphics - Self-adhesive films” on the www.mactacgraphics.eu website.

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