

MACal® 9300 PRO

PRODUCT DESCRIPTION

MACal 9300 PRO are high performance polymeric stabilized calendered soft vinyl films coated with a durable permanent adhesive giving excellent dimensional stability.

MACal 9300 PRO is designed for trouble-free computer cutting and fast weeding, even for small letters and fine lines.

Face Material: Polymeric stabilized calendered vinyl, 70 µm thick, cadmium-free.

Adhesive: Black, white and colours: High quality clear permanent acrylic iA-tech™ adhesive

Metallic colours: High quality clear permanent acrylic adhesive

Liner: Highly stable 135 gsm white kraft paper with grey backprinting.

For white vinyls the liner is coated with a blue silicone coating to improve the contrast with the film colour.

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

TYPICAL USE

MACal 9300 PRO is designed for long term interior and exterior marking applications (vehicle marking, window graphics, signs...).

MACal 9300 PRO provides ideal conformability over simple contours.

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 9300 PRO can be applied with the dry application method on slightly curved surfaces. On flat surfaces the dry or the wet application method is suitable.

MACal 9300 PRO provides up to 4 years of clean removability (metallic colours excluded).

MACal 9300 PRO vinyls can be applied using the wet application method bearing in mind that:

- No soap or surfactants should be mixed with water. Only water suffices for the application process;
- Wait at least 15 minutes before removing the application tape to allow a solid adhesion build up onto the application substrate;

Edge sealing and varnishing

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.

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.

SHELF LIFE

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	95	ISO 534	
Face Material data, 23°C			
Tensile Strength (N/15mm)	27	DIN ISO 527-3	
Elongation at Break (%)	150	DIN ISO 527-3	
Adhesive data, 23°C (N/25 mm)			
Peel adhesion 180° on stainless steel			
	perman ent adhesive	iA-tech™ adhesive	
- 20 min. residence	10	10	FTM1
- 24 hour residence	12	12	FTM1

- 1 week residence	15	15	FTM1
Dimensional stability			
Shrinkage (1 week at 70°C applied on Aluminium)	< 0.3 mm	FTM14	
Temperature ranges			
Application temperature (°C)		+ 10°C to + 40°C	
Service temperature range (°C)		- 40°C to + 90°C	
Flammability			
Sample mounted on aluminium		B-s1,d0	EN 13501-1
Solvent and chemical resistance			
Resistance to:	Detergent 1%, Detergent solution at 65°C, IPA/Water (20/80)	no impact	

EXPECTED DURABILITY

central Europe Zone 1 - vertical outdoor durability

White & Black	8 years	ISO 4892-2
Colours	7 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.https://www.mactacgraphics.eu](https://www.mactacgraphics.eu) website.

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