

MACal® 9300 PRO

Technical Data Sheet

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.

CONSTRUCTION

Face material :

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

Adhesive :

High quality clear solvent based permanent acrylic adhesive.

Liner :

Highly stable 135 gsm white kraft paper with red 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 USES

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.

EXPECTED DURABILITY

The expected vertical outdoor durability of the unprocessed product in central Europe (Zone 1) is up to:

8 years : white and black.

7 years : colours.

5 years : metallics.

This information is based on successful real life experience and artificial aging according to 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.

SHELF LIFE

2 years when stored at 15 to 25°C and ± 50 % relative humidity.

PHYSICAL PROPERTIES (Typical values)

Thickness (mm) (Film + adhesive) ISO 534
0.095

Face Material Data, 23°C DIN ISO 527-3

Tensile strength : ≥ 27 N/15mm

Elongation at break : ≥ 150 %

Adhesive Data, 23°C FTM 1

Peel adhesion 180° on stainless steel (N/25mm)

- 20 min. residence : 15

- 24 hours residence: 17

- 1 week residence: 19

Dimensional stability FTM 14

Shrinkage (1 week at 70°C) : < 0.3 mm

Temperature ranges :

Application : + 8°C to + 40°C

End-use : - 40°C to + 90°C

Flammability ISO 3795

Sample mounted on aluminium : self-extinguishing.

Solvent and chemical resistance

Resistant to most oils and grease, fuel, aliphatic solvents, weak acids, salts and alkalis.

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.

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 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.