

# MACal<sup>®</sup> 9800 PRO

## *Technical Data Sheet*

### **PRODUCT DESCRIPTION**

MACal 9800 PRO are high performance polymeric stabilized calendered soft vinyl films coated with a durable permanent adhesive giving excellent dimensional stability. MACal 9800 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, 66 µm thick, cadmium-free.

#### **Adhesive :**

High quality clear solvent based permanent acrylic adhesive. A white version of this adhesive is used for MACal 9800 PRO SL.

#### **Liner :**

Highly stable 135 gsm white kraft paper with blue backprinting.

For white vinyls the liner is coated with a grey 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 9800 PRO is designed for long term interior and exterior marking applications (vehicle marking, window graphics, signs...).

MACal 9800 PRO SL are intense, vibrant colours for eye-catching markings.

MACal 9800 PRO provides ideal conformability over simple contours.

### **DURABILITY**

8 years : white and black.

7 years : colours.

5 years : metallics.

These use-life estimates are based upon accelerated ageing studies and outdoor exposure, under conditions experienced in vertical exposure and in "normal" temperate climates.

**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 and south-facing exposure.

### **SHELF LIFE**

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

### **PHYSICAL PROPERTIES** (Average values)

**Thickness** (mm) (Film + adhesive) ASTM D-645  
0.95 (0.100 for 9800 SL)

**Face Material Data, 23°C** DIN 53455

Tensile strength : ≥ 1.5 kN/m

Elongation at break : ≥ 150 %

**Adhesive Data, 23°C** FTM 1

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

- 20 min. residence : > 15 (> 14 for 9800 PRO SL)

- 1 week residence : > 20 (> 18 for 9800 PRO SL)

**Dimensional stability** FTM 14

Shrinkage (48 hours at 70°C) : < 0.1 %

(< 0.3 % for 9800 PRO SL)

(25 cm x 25 cm, sample mounted on aluminium).

#### **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 9800 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.

**IMPORTANT NOTICE**

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