

# MACal<sup>®</sup> 8128 / 8129 / 8199 – PERMANENT

## Technical Data Sheet

### DESCRIPTION

#### **Face stock :**

Soft calendered PVC films, ~ 100 µm, cadmium-free, dull or gloss finish.

**Macal<sup>®</sup> 8128 :** Dull white

**Macal<sup>®</sup> 8129 :** Gloss white

**Macal<sup>®</sup> 8199 :** Gloss transparent

**Adhesive :** Permanent, acrylic water based.

**Liner :** Coated Kraft paper, ca. 140 gr/sqm.  
 - Secury 13 (without breaklines)  
 - Macline<sup>®</sup> (with mechanically scored breaklines 6 cm apart).

**Laminate :** ca. 275 gr/sqm.

### PHYSICAL AND CHEMICAL CHARACTERISTICS (TYPICAL VALUES)

**Quick tack :** 12 N/25 mm FTM 9, on glass

**Peel 20 min. :** 8 N/25 mm FTM 1, on glass

**Peel 24 h. :** 16 N/25 mm FTM 1, on glass

**Resistance to shear :** > 30 h FTM 8, on glass

**Dimensional stability (applied) :**  
 max. 1.0 % FTM 14, alu

**Dimensional stability on the backing paper (unapplied) :**  
 max. 1.0 % Measured after 72 h at 60°C

**Temperature range :**  
 Minimum application temperature : + 5°C  
 Service temperature range : - 20°C to + 70°C

**Flammability :** Self-extinguishing ISO 3795

**Toy labelling :** in compliance with EN 71/3

**Marine test BS5609 :** MACal 8129 passed.

**Solvent resistance :** No effect.  
 Applied to stainless steel, exposed to :  
 oils, greases, aliphatic solvents, alcohols.

**Petrol resistance :**  
 If extended contact, edge-lifting will occur.  
 Repeated (each 10 min.) petrol spraying.

**Chemical resistance :** No effect.  
 Mild acids. Mild alkalis.

**Shelf life :** stored at 50 ± 10 % RH at 15 - 25°C.  
 2 years for as long as the material is being stored in its original packaging.

**Durability :** 2 years.

Middle European exposure conditions, vertical exposure. Exposure to severe humidity, ultra-violet light or conditions found in tropical, subtropical or desert regions will cause a more rapid deterioration than under conditions existing in "normal" temperate climates.

### PRINTING METHODS

Screen printing / UV Offset.

Conventional offset : for easy printing and better results, we recommend our special gloss white vinyl, STARvinyl. Printing on MACal 8100 series should be also possible (please contact your ink supplier).

During printing, it is important that drying is carefully exercised to ensure removal of printing inks solvents since certain solvents if retained can lead to plastification problems with subsequent application troubles and poor weathering properties.

We recommend to maintain an unprinted area of 3-4 mm on the edges of the printed decal to avoid edge lifting.

For solvent digital printing, we recommend the use of MACTac IMAGin JT 5000 products.

### APPLICATIONS AND USES

Stickers for advertising and promotional campaigns, emblems and printed labels for in- and outdoor use.

### GENERAL REMARK : factors affecting adhesion

*Adhesion failure problems can be avoided by :*

- *Where possible, always test the proposed construction under actual application and end-use conditions because a 100 % multi-purpose adhesive for all substrates does not exist.*
- *Being familiar with factors which adversely affect adhesion :*
  - *Labels or stickers should not be applied onto dusty, dirty, oily or oxidized surfaces.*
  - *Mould release agents on blow-moulded plastic surfaces inhibit adhesion.*
  - *Adhesion failure may occur on substrates with low surface tension, such as polyethylene or polypropylene. Rubber based adhesives stick better to low energy surfaces than acrylics.*
  - *Avoid the use of relatively rigid facestocks on highly curved or small diameter surfaces.*
  - *Do not use pressure-sensitive materials outside the recommended service temperature range, or do not apply below the minimum application temperature.*