



MACprint® / MACscreen®

Product data : STARvinyl - PERMANENT

DESCRIPTION

Face stock :

Gloss White soft calendered PVC film, ~ 100 µm,
Cadmium free.

Specially formulated for printing by traditional wet offset printing process or UV drying.

Adhesive : Permanent high-performance, acrylic water based.

Liner : Coated Kraft paper, ca. 140 g/m² :

- Secury 13 (without breaklines)
- Starliner® (with mechanically scored breaklines 31,5 mm apart).

Laminate : ca. 280 g/m²

ADHESION PROPERTIES :

	TACK	ADHESION
PERMANENT ACRYLIC WATER BASED : For general purposes.	••	••

••• : High •• : Medium • : Low

(TYPICAL VALUES)

Quick tack : 16 ± 3 N/25 mm FTM 9, on glass

Peel 20 min. : 12 ± 3 N/25 mm FTM 1, on glass

Peel 24 h. : 20 ± 3 N/25 mm FTM 1, on glass

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

Dimens. stability (applied) : max. 1,0 % FTM 14, alu

Dimens. stability on the backing paper (unapplied)
max. 1,0 % Measured after 72 h at 60° C

Temperature range :

Min. 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

BS 5609 (Marine use) : Pass

Food contact : approval for direct application on dry or moist, non-fatty food ISEGA/BgVV

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.

3 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 more rapid deterioration than under conditions existing in "normal" temperate climates.

APPLICATIONS AND USES

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

Ideal when resistance to moisture, grease, oil, chemicals is requested.

SOME TIPS FOR PERFECT PRINTING

Normal offset inks dry primarily by absorption into the paper. This action is of course not possible with impermeable synthetic material. The ink has to be adapted for printing on a non-absorbant surface, ie. for materials without a fibrous structure which do not absorb ink and dampening water. These inks dry by oxidation if the printer does not have access to an ultraviolet drying system.

It must also be fully appreciated that the dampening water will also not be absorbed. That is why it is important to reduce the fountain solution to a minimum, the balance of ink/dampening water being crucial for a good drying.

General recommendations

1. Check with your ink supplier that the blanket and rollers are compatible with the ink that you use.
2. Plates with a very smooth surface, which carry less water are preferred.
3. The pH of the dampening water must be scrupulously respected. It depends on the type of ink, although is generally kept at around 5.5 by adding IPA alcohol (isopropanol) in the proportion of around 8% to 10%. Ink suppliers advised their own dampening additives. Verify with them the recommended proportions. Alcohol has practically no effect on the pH of the dampening water but it does reduce the surface tension of water, which increases its wetting properties.
4. As the film does not absorb the dampening water, the automatic dosing system will have to be regularly readjusted in order to compensate for the evaporation of the IPA alcohol.
5. Start up printing with the minimum quantity of dampening water in order to prevent emulsification of water into the ink. Keep the water feed just above the situation where the plate dries. Too much water will lead to poor ink transfer and a long drying time.
6. If possible, do not use drying additives in the ink but especially mineral oils as these will interfere in the drying process. If they are however necessary, use the

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siccative recommended by your ink supplier and ensure that they are mixed in thoroughly.

7. To prevent set-off and improve drying, use sufficient spray powder of a low granulation and only stack up sheets at between 200 and 500 at a time. Drying the sheets by infra red is not normally recommended as the accumulated heat could prolong the drying time and increase the risk of set-off.
8. To improve drying, it is sometimes helpful to aerate the stacks.
9. The printed stacks require a minimum of 24 hours before any other handling of the sheets. Guillotine a maximum of 200 sheets at a time.
It is preferable to complete printing in one pass (multicolour printing). Printing in cold and moist conditions can cause problems. The sheets will be conditioned for 24 hours before printing in the printshop, ambient humidity 50% - 60%, temperature 20-22°C.

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.*

Important note.

All MACTac products are subject to careful quality control throughout the manufacturing process and are warranted to be of merchantable quality and free from manufacturing defects. Published information concerning MACTac products is based upon research which the Company believes to be reliable, although such information does not constitute a warranty. Because of the variety of uses of MACTac products and the continuing development of new applications, the purchaser should carefully consider the suitability and performance of the product for each intended use, and the purchaser shall assume all risks regarding such use. The seller shall not be liable for damages in excess of the purchase price of the product nor for incidental or consequential damages.