

PERMAfun Frost

PRODUCT DESCRIPTION

PERMAfun Frost is a premium glossy polymeric vinyl with an ice crystal structure and a special adhesive which allows excellent adhesion on all kinds of inkjet digital inks, including UV ones.

This film can be used indoor and outdoor, as an overlaminating film of the MACal 9800 Pro range to give the appearance of ice crystals or on digital prints to give them a special texture. Used with well chosen visuals of the JT5900 series, it allows to create nice frosted effects.

This MACtac film is designed for high profile applications over *flat to slightly curved (convex)* surfaces and to create unique effects in eg interior design, hotel decoration ...

Due to its unsmooth structure, Permafun Frost is slip resistant ; being rated R10 in DIN 51130, it can therefore be used as overlaminate for indoor floor graphics applications too.

Face : satin, cadmium-free clear 150 µm polymeric vinyl with a ice crystal aspect

Adhesive : high tack, permanent, clear solvent adhesive

Liner : 135g/m² clay coated white paper

PHYSICAL PROPERTIES

	<u>Average values</u>	<u>Test method</u>
<u>Adhesive</u>		
Quick Tack on glass (N/25 mm)	14	FTM 9
Peel 180° on glass (N/25 mm)		
- after 20 minutes	14	FTM 1 (ASTM D 903-49)
- after 24 hours	20	FTM 1 (ASTM D 903-49)
Dimensional stability	< 0.6mm	FTM 14
Flammability	Self-extinguishing	Sample mounted on aluminium
<u>Thickness</u>		
Film + adhesive (µ)	180	ISO 534 (ASTM D 645)

HEAT RESISTANCE

Application temperature range : 5°C to + 40°C

End-use temperature range : - 45°C to + 70°C

For temperatures outside those quoted above, please consult MACtac.

SHELF LIFE

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

EXPECTED DURABILITY

The expected vertical outdoor durability of the unprocessed product in Central Europe (Zone 1) is up to 3 years. This information is based on successful real life experience and artificial aging according to ISO 4892-2.

Note : Exposure to severe temperatures, ultra-violet light as well as conditions in Southern European countries, tropical, sub-tropical or desert regions will cause more rapid deterioration. This also applies to polluted areas, high altitude and south facing exposure. No durability warranty is given for horizontal exposure. For more information, please refer to Technical Bulletin 7.5: "Outdoor Durability of combined MACtac print media and laminates".

RECOMMENDATIONS

- Where exposure to chemicals, solvents or high pressure water hoses is envisaged, it is recommended to seal the edges of the prints with varnish or silicone in order to avoid penetration of these liquids.
- The use of flat bed laminator is not recommended to laminate UV prints as the pressure is not sufficient to avoid silvering.
- 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.

APPLICATIONS

1) Used as a cut vinyl :

Application of PERMAfun Frost when used as a cut vinyl is made easier if MACtac pre-spacing tape is used, or can be applied as an overlaminating film with a standard laminator (at 40°C or more to avoid silvering). Where exposure to chemical and solvent spills are likely to occur, edge sealing with a varnish is recommended.

2) In combination with coloured vinyls (Macal 9800 Pro- Macal 8900 Pro – Macal 8300 Pro) : because this is a much thicker complex to apply, MACtac offers a limited warranty on flat to slightly curved surfaces. There is no warranty for PERMAfun Frost on motor vehicle wrap, over rivets and corrugations, complex surface or marine graphics.

3) Used as an overlaminate on prints : to create unique frost aspect for interior design applications ; only on flat to simply curved surfaces.

IMPORTANT NOTICE

*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.
All specifications are subject to change without prior notice.*