

Technical Data Sheet

PERMAfun Carbon Clear

PRODUCT DESCRIPTION

PERMAfun Carbon Clear is a premium monomeric vinyl with a carbon fiber structure and a special adhesive which allows excellent adhesion on all kinds of inkjet digital inks, including UV ones.

Used with well chosen digitally printed visuals on JT5900 series, Permafun Carbon clear allows to create modern images with a carbon fiber finish. This film can also be used as an overlaminating film of the MACal 9800 Pro, 8900, 8200 range to create a new wide range of colours with the carbon fiber structure.

This MACtac film is designed for high profile applications over *flat* surfaces, indoor and very short term outdoor, and to create unique effects in eg interior design, hotel decoration, furniture wrapping, car tuning ...

Face : cadmium-free 170µm polymeric vinyl

Adhesive : high tack, permanent, clear solvent adhesive

Liner : 135g/m² clay coated white paper with Permacolor backprinting

PHYSICAL PROPERTIES

	<u>Typical values</u>	<u>Test method</u>
<u>Adhesive</u>		
Quick Tack on glass (N/25 mm)	13	FTM 9
Peel 180° on glass (N/25 mm)		
after 20 minutes	12	FTM 1
after 24 hours	16	FTM 1
Dimensional stability (applied on aluminium)		FTM 14
- MD	<0.4%	
- CD	<0.4%	
Flammability	self-extinguishing	sample mounted on aluminium
<u>Thickness</u>		
Film + adhesive (µ)	200	ISO 534

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.

DURABILITY

PERMAfun Carbon Clear will give satisfactory performance during 6 years indoor. For outdoor application a maximum of 18 months. The durability does not relate to the image protected but only to the laminating film.

Note : The use-life estimate is based upon accelerated age studies based on vertical application under "normal" temperate climates. Please note that exposure to severe temperatures, ultra-violet light and also 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.

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.
- 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 Carbon Clear 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 of decals with a varnish or a clear coat is recommended. Correct varnishing of decals gives greater protection and longer end-use life against any prolonged effect of weathering, abrasion and other erosive effects such as frequent cleaning.

2) In combination with coloured vinyls (Macal 9800PRO – MACal 8900PRO): because this is a much thicker complex to apply, MACtac offers a limited warranty on flat surfaces. There is no warranty for PERMAfun Carbon Clear on vehicle wraps, over rivets and corrugations, marine graphics or complex surfaces as well as no warranty on horizontal surfaces or in countries with extreme temperatures and UV conditions (eg zone 3). Scratch resistance of the product is not warranted either.

3) Used as an overlaminate on prints : to create unique, modern, carbon fiber texture for interior design applications, furniture covering, car wrapping ; only on flat surfaces. Warranty limited as in 2).

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.