

Technical Data Sheet

PERMAfun Crystal Gloss

PRODUCT DESCRIPTION

PERMAfun Crystal Gloss is a premium cast vinyl with a high gloss and high concentration of light refracting additives. This film can be used indoor and outdoor, as an overlaminating film of the MACal range for a glistening appearance or on high quality graphics printed on JT5900 series to really enhance the colours of your image.

This MACTac film is designed for high profile applications over *flat to slightly curved (convex)* surfaces and to create unique effects in eg fleet marking, logos, automotive, equipment identification, signs...

Crystal gloss has a very high gloss finish; in order to retain the gloss level prior to application, it is supplied with its casting sheet. This sheet needs to be removed before application. Timing of removal will depend on the application :

Lamination of photos, application of Crystal Gloss with a squeegee on flat surfaces : casting sheet can be removed after application.

Car wrapping requires the applicator to remove the casting sheet before using the product.

Face : glossy sparkling cadmium-free clear 60 µm cast vinyl **protected by its casting sheet**

Casting sheet : ~40 µm PET film that can be recycled.

Adhesive : high performance permanent, clear solvent adhesive

Liner : 130g/m² white kraft liner

PHYSICAL PROPERTIES

	<u>Average values</u>	<u>Test method</u>
<u>Adhesive</u>		
Quick Tack on glass (N/25 mm)	20	FTM 9
Peel 180° on glass (N/25 mm)		
- after 20 minutes	18	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)	100	ISO 534 (ASTM D 645)

HEAT RESISTANCE

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

End-use temperature range : - 45°C to +100°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 5 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.
- 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 Crystal Gloss 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. Permafun Crystal gloss should never be applied directly onto the substrate.

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 Crystal Gloss on motor vehicle wrap, over rivets and corrugations, complex surface or marine graphics.

3) Used as an overlaminate on prints : to create unique sparkling touch for luxury application segments ; 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.