K70000 Series
Gloss cast vinyl

Description
These premium quality cast vinyl films are intended for use in all exterior marking and signage applications. The films have the ultimate properties for outdoor durability and are suitable for graphics on original equipment identification, building signage and vehicle graphics to include trucks, recreational vehicles and automobiles. They are also widely used for train liveries, boats and as temporary livery on aircraft. End users include Ford, GM and national airlines.

The materials are very conformable, being able to be used on smooth, textured and contoured surfaces, and are available in a wide range of colours including metallic. Custom colour matching is offered to suit specific requirements. (Subject to minimum quantities).

Available from stock in 610mm and 1220 mm.

Technical Data

Characteristic	Test Method	Typical Value
Film Thickness	ISO 4591:1992	0.050mm
Adhesive Thickness	ISO 4591:1992	0.025mm
Adhesive Type		Clear Permanent Cross-Linking Acrylic
Release Liner		150gsm Kraft Printed Blue
Storage		Two years, out of direct sunlight at 23°C and 50% humidity
Tensile	ISO 527:1996	>13.5 N/mm²
Elongation	ISO 527:1996	>75%
Adhesion 20 Mins/90°	FINAT FTM2/Stainless Steel	450 N/Metre
Adhesion 20 Mins/180°	FINAT FTM1/Stainless Steel	570 N/Metre
Adhesion 24 Hrs/180°	FINAT FTM1/Stainless Steel	700 N/Metre
Static Shear (25 x 25mm)	FINAT FTM8/Stainless Steel	>16 hours
Dimensional Stability (150 x 150mm/48 hours/70°C)	FTM14/Aluminium	<0.4mm
Gloss 60°	ASTM 523-89	>85%
Flammability		Self Extinguishing
Artificial Weathering	Atlas Xenon Arc	>2000 hours
Weathering	Vertical Exposure/Mid Europe	Black/White 10-12 years Colours 8-10 years
Rivet Testing	KPMF ST 22	No Cracking
Application Temperature	Clean, dry surface	+8°C to 25°C
Service Temperature		-40°C to + 90°C

Adhesion Properties to Various Substrates for 24 hours at 23°C/180° Peel

Aluminium - Untreated	860 N/Metre
Aluminium - Anodised	940 N/Metre
Stainless Steel	700 N/Metre
Chromed Steel	690 N/Metre
Polyurethane	400 N/Metre
Glass	700 N/Metre
Acrylic Sheet	700 N/Metre
ABS Sheet	580 N/Metre

Resistance to various liquids after application and conditioned for 24 hours at 23°C. Results examined 1 hour after test.

Humidity 24 hours at 38°C and 100%	No Effect
Water (Distilled) 24 hours at 32°C	No Effect
Sea Water 1 year Mid Tide (BS 5609:1986)	No Effect
Reference Fuel 1 hour at 23°C	Very Slight Film Softening
Diesel Fuel 1 hour at 23°C	No Effect
SAE Motor Oil 24 hours at 23°C	No Effect
Antifreeze/Water (1:1) 24 hours at 23°C	No Effect
Detergent Solution 8 hours at 65°C	No Effect
Hydraulic Oil 24 hours at 23°C	No Effect
Battery Acid 24 hours at 23°C	No Effect

Although KPMF have good control of the colour production, it is advisable to avoid using different batches of material for the same end application.

Technical Data (continued)

General

KPMF films should not be applied to unsound surfaces or to surfaces which may subsequently crack, peel, outgas or are of low surface energy. It is recommended that any application surface should have an energy level in excess of 40 dyne/cm. (Polyolefins should be in excess of 45 dyne/cm). The above data shows typical properties and should not be taken as a guarantee for performance. Purchasers should determine the suitability of each product prior to its intended use. Prolonged exposure to high and low temperatures in the presence of chemicals such as solvents, acids etc. may eventually cause deterioration. Durability is based on middle European exposure conditions.

Actual performance will depend on substrate preparation, exposure conditions and application of marking.

Important

Kay Premium Marking Films are produced under stringent manufacturing conditions. The information and typical values shown are based upon research believed to be reliable and are provided without guarantee and do not constitute a warranty. The values are not for use in specifications. Ink and paint systems can affect the performance of film and also the adhesive properties, as can application techniques. Users are advised to ensure that performance and reliability are not compromised by determining the suitability of each product prior to its intended use.