



### K81200 Series Black Functional Film

These superior quality, calendered polymeric vinyl films have been specially developed for use in the automotive and other industries for blackout, kick tread and stoneguard applications. They allow designers to reduce additional painting processes, apply film to areas that are vulnerable to stone chipping or scratching and use film to create unique product and model variations. In particular, they can be used for A/B/C Pillars, Window Profiles, Wheel Arches and General Decoration. Automotive users include Ford, GM, Volkswagen, Toyota and Nissan.

The films are available as:

K81211	Textured Black FF 100 Micron	K81232	Textured Black FF 320 Micron
K81213	Textured Black FF 125 Micron	K81240	Textured Black FF 400 Micron
K81215	Textured Black FF 150 Micron	K81250	Non Textured Black FF 500 Micron
K81217	Textured Black FF 175 Micron	K81251	Textured Black FF 500 Micron
K81219	Textured Black FF 190 micron		

CHARACTERISTIC	TEST METHOD	TYPICAL VALUE (K81219)
Film Thickness	ISO 4591:1992	0.190mm / 0.320mm / 0.500mm
Adhesive Thickness	ISO 4591:1992	0.040mm / 0.060mm
Adhesive Type		Clear Permanent Cross-Linking Acrylic
Release Liner		Single Sided PE Liner / Kraft Liner
Storage		Two years, out of direct sunlight at 23°C and 50% humidity
Tensile	ISO 527:1996	>13.5 N/mm <sup>2</sup>
Elongation	ISO 527:1996	>50%
Adhesion 20 Mins/90°	FINAT FTM2/Stainless Steel	550 N/Metre
Adhesion 20 Mins/180°	FINAT FTM1/Stainless Steel	730 N/Metre
Adhesion 24 Hrs/180°	FINAT FTM1/Stainless Steel	830 N/Metre
Static Shear (25 x 25mm)	FINAT FTM8/Stainless Steel	>16 hours
Dimensional Stability (150 x 150mm/48 hours/70°C)	FTM14/Aluminium	<0.5mm
Gloss 60°	ASTM 523-89	N/A
Flammability		Self Extinguishing
Artificial Weathering	Atlas Weatherometer	>2,000 hours
Weathering Black	Florida	>2 years
	Arizona	>2 years
Rivet Testing	KPMF ST 22	N/A
Application Temperature	Clean, dry surface	+8°C to 25°C
Service Temperature		-40°C to +90°C
<b>Adhesion Properties to Various Substrates for 24 hours at 23°C/180° Peel</b>		
Aluminium - Untreated		1,215 N/Metre
Aluminium - Anodised		1,190 N/Metre
Stainless Steel		830 N/Metre
Chromed Steel		900 N/Metre
Polyurethane		560 N/Metre
Glass		830 N/Metre
Acrylic Sheet		830 N/Metre
ABS Sheet		760 N/Metre
<b>Resistance to various liquids after application and conditioned for 24 hours at 23°C. Results examined 1 hour after test.</b>		
Humidity	300 hours	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

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.

#### WARRANTY

Kay Premium Marking Films are produced under careful quality control and are warranted to be fit for the purpose and free from defect in material and workmanship. Any material shown to be defective to our satisfaction at the point of sale shall be replaced free of charge. Kay Premium Marking Films Limited liability to the purchaser shall in no circumstances exceed the cost of the amount of the defective material supplied.