

K50000/K51000 Series Vinyl

Product Description

A range of calendared films suitable for long-term marking applications in exterior and interior environments. The 75 - 80-micron thickness offers excellent cutting and weeding properties and the permanent acrylic adhesive system gives superb adhesion to a variety of substrates.

These superior quality, soft polymeric vinyl films are formulated using the latest advances in PVC and pigment technology to offer improved dimensional stability, conformability and excellent long-term durability with a 5 – 7-year life.

The etched glass products were developed to offer a high-quality replacement for the more traditional methods of window etching. They present excellent cutting and weeding properties are suitable for use on interior and exterior glass and demonstrate a level of conformability that make them suitable for use on smooth and contoured surfaces.

All K50000 / K51000 Series products are supplied on a kraft liner that provides excellent lay flat characteristics.

Recommended Uses

- Vehicle graphics
- Signage
- Window graphics
- Equipment identification
- All general sign and decal applications

Products Available

- | | | |
|-------------------------|------------------------|---------------------|
| ▪ K50001 Clear | ▪ K50011 White | ▪ K50021 Black |
| ▪ K51001 Matt Clear | ▪ K51011 Matt White | ▪ K51021 Matt Black |
| ▪ K50013 Medium Grey | ▪ K50015 Dark Grey | ▪ K50553 Ruby |
| ▪ K50554 Sangria Red | ▪ K50058 Strawberry | ▪ K50551 Dragon Red |
| ▪ K50557 Pepper Red | ▪ K50038 Melon | ▪ K50335 Turmeric |
| ▪ K50331 Yellow Sunrise | ▪ K50032 Primrose | ▪ K50441 Orange |
| ▪ K50713 Apple | ▪ K50074 Lime | ▪ K50071 Kelly |
| ▪ K50075 Mid Green | ▪ K50772 Jungle Green | ▪ K50067 New Aqua |
| ▪ K50063 Ocean | ▪ K50066 Olympic | ▪ K50069 Marina |
| ▪ K50061 Vivid Blue | ▪ K50064 Ultramarine | ▪ K50062 Aztec |
| ▪ K50511 Violet | ▪ K50056 Hot Pink | ▪ K50087 Camel |
| ▪ K50911 Silver | ▪ K50921 Dark Charcoal | ▪ K50931 Gold |
| ▪ K51111 Etch Silver | ▪ K51112 Textured Etch | ▪ K51131 Etch Gold |
| ▪ K51113 Frosted Etch | | |
| ▪ (60"/1.52m) | | |

Face Film

- 75µm Polymeric Calendared Colours
- 80 – 100 µm Polymeric Calendared Etch Glass

Adhesive

- 25g/m² clear semi-permanent solvent-based acrylic
- 25g/m² white permanent solvent-based acrylic

Release Liner

Kraft - printed blue KPMF logo

Widths

1220mm & 1524mm (see K50000 Series price structure for standard widths of individual products)

Durability

Up to 7 years outdoors
(vertical exposure, mid-Europe)

Shelf Life

2 years
(out of direct sunlight, between 15°C and 23°C, 30% to 70% relative humidity)

Physical Characteristics

	Test Method	Typical Value
Film Thickness	ISO 4591:1992	75µm (Etch Glass: 80 – 100 µm)
Elongation	ISO 527-3:2018	>50%
Dimensional Stability (48 hours/70°C)	FTM14/Aluminium	<0.5mm
Gloss 60°	ASTM D523-14 (2018)	Gloss: >70 Matt: <20 Etch Glass: <30
20 minute 180° Peel	FTM1/Painted Steel	Clear Adhesive: >650N/m White Adhesive: >250N/m
24 hour 180° Peel	FTM1/Painted Steel	Clear Adhesive: >850N/m White Adhesive: >650N/m
Flammability		Self-Extinguishing
Artificial Weathering	Xenon Arc	Solid colour: >1000 hours Etch Glass: >2000 hours
Outdoor Weathering	Vertical Exposure/Mid Europe	
Black/White/Clear Colours		7 Years 5 Years
Temperature Range		
Application Temperature		Minimum +10°C
Service Temperature		-40°C to +90°C
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
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

Product Usage Guide

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).

Prolonged exposure to high and low temperatures in the presence of chemicals such as solvents, acids etc. may eventually cause deterioration. Actual performance will depend on substrate preparation, exposure conditions and application of marking.

Although we have good control of the colour production of KPMF products at our multiple locations, as with all other manufacturer's products, customers should be aware that there may be subtle variances between samples, swatches and production materials, so therefore it is advisable to avoid using different batches of material for the same end application to avoid possible colour shifts between the batches.

Products that have the metallic finish are considered to be special products in view of their pigmentation. In order to achieve the metallic effect, special pigments must be used. The pigmentation causes the surface sheen to be generally more uneven. The stability of these products on weathering tests and also post cleaning also varies, depending on the pigmentation, it is recommended that no harsh solvents are used to clean the PVC and should these be required then a section should be tested first. In general, results are much less stable than the other non-metallic products in same series. Depending on the type of application (i.e. horizontal or vertical base) the life expectation of the film is lower, particularly in the case of higher atmospheric temperatures. The reduction in stability during weathering tests becomes noticeable as it causes increasing discoloration and the loss of mechanical characteristics. Care should be taken when

completing applications using metallic finished products, if the adhesive side of the vinyl is allowed to overlap and make contact with the face of the film this could result in aluminium particles being lifted from the face of the film leading to a slight change to the perceived colour and finish being observed.

Application temperature onto clean, dry surface Min +10°C

Product Warranty

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.

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. This product has been warranted to provide clean removability, under controlled conditions, up to a period of three years from a range of substrates. Clean removability is deemed with less than 30% adhesive residue when using heat and chemical removal methods. Exceptions to the removal warranty are those applied to the following: pre-existing graphics, paint which is not properly bonded to the substrate and custom paint applications. There is no guarantee made for; ease or speed of graphic removal, removal from improperly cured paint, removal from oxidized or chalked substrates, or from horizontally exposed outdoor applications. Due to the large variety of available paint finishes, it is advisable to fully evaluate small areas particularly after printing prior to complete applications.

The data included on the Data sheet shows typical properties and should not be taken as a guarantee for performance.