

K81000 / K81200 Series Functional Films

Product Description

Superior quality, calendered polymeric vinyl films.

K81000 Clear Functional

Specially developed for use in the automotive and other industries to offer protection to areas that are vulnerable to stone chipping or scratching. End users of K81000 Clear include a number of OEMs. The film is suitable for a variety of printing methods.

K81001 StepView

Specially developed for floor graphic applications, it has excellent dimensional durability, exceptional slip resistance and perfect print clarity making it suitable for use over a variety of printed substrates produced by conventionally printed and digital methods. This material has undergone extensive wet and dry slip resistance evaluation by an independent laboratory to “Skid Resistance Test DSIR RRL”.

K81200 Black Functional

Specially developed for use in the automotive and other industries for blackout, kick tread and stone-guard applications. Offers protection to areas that are vulnerable to stone chipping or scratching. Particularly suitable for A/B/C Pillars, Window Profiles, Wheel Arches and General Decoration. End users of K81200 Black include a number of OEMs.

Recommended Uses

K81000 Clear Functional

- Kick treads
- Stone-guard applications

K81001 Step View

- Protective slip resistance for floor graphics

K81200 Black Functional

- Blackout
- Kick tread
- Stone-guard applications
- A/B/C pillars
- Window profiles
- Wheel arches

Products Available

- K81030 Clear Functional
- K81001 Step View
- K81219 Black Functional
- K81232 Black Functional

Face Film

190µm – 320µm Polymeric Calendered

Adhesive

40g/m² clear permanent solvent-based acrylic

Release Liner

Kraft

Widths

1220mm

Durability

See weathering information in Physical Characteristics below

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 | | | |
|---------------------------------------|-----------------------------|--------------------|------------|-------------|-------------|
| | | K81030 | K81001 | K81219 | K81232 |
| Film Thickness | ISO 4591:1992 | 300µm | 300µm | 190µm | 320µm |
| Elongation | ISO 527-3:2018 | 50% | 75% | 75% | 75% |
| Dimensional Stability (48 hours/70°C) | FTM14/Aluminium | <0.5mm | <0.5mm | <0.5mm | <0.1mm |
| 20 minute 180° Peel | FTM1/Painted Steel | 450N/m | 600N/m | 600N/m | 600N/m |
| 24 hour 180° Peel | FTM1/Painted Steel | 600N/m | 700N/m | 700N/m | 700N/m |
| Static Shear | FTM8/Painted Steel | >16 hours | >16 hours | >16 hours | >16 hours |
| Flammability | | Self-extinguishing | | | |
| Artificial Weathering | Atlas Xenon Arc - SAE J2527 | >1000 hours | >500 hours | >2000 hours | >2000 hours |
| Outdoor Weathering | Florida/Arizona | - | - | >2 years | >2 years |

Temperature Range

| | |
|-------------------------|----------------|
| Application Temperature | Minimum +18°C |
| Service Temperature | -40°C to +90°C |

Adhesion properties to various substrates at 23°C, 24 hour 180° peel.

| | K81030 | K81001 | K81219 | K81232 |
|-----------------------|----------|----------|----------|----------|
| Aluminium – Untreated | 1215 N/m | 1220 N/m | 1215 N/m | 1215 N/m |
| Aluminium – Anodised | 1190 N/m | 1195 N/m | 1190 N/m | 1190 N/m |
| Stainless Steel | 830 N/m | 835 N/m | 830 N/m | 830 N/m |
| Chromed Steel | 900 N/m | 910 N/m | 900 N/m | 900 N/m |
| Polyurethane | 560 N/m | 565 N/m | 560 N/m | 560 N/m |
| Glass | 830 N/m | 835 N/m | 830 N/m | 830 N/m |
| Acrylic Sheet | 830 N/m | 835 N/m | 830 N/m | 830 N/m |
| ABS Sheet | 760 N/m | 765 N/m | 760 N/m | 760 N/m |

Abrasion Resistance

| | | | | |
|--|---|---|--------------------|--------------------|
| 300 Cycles (SAE J400 1 pint of gravel) | - | - | No loss of pattern | No loss of pattern |
|--|---|---|--------------------|--------------------|

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

| | | K81030 | K81001 | K81219 | K81232 |
|------------------------|---------------------------|-----------|-----------|-----------|-----------|
| Humidity | 24 hours at 38°C and 100% | No effect | No effect | No effect | No effect |
| Water (Distilled) | 24 hours at 32°C | No effect | No effect | No effect | No effect |
| Diesel Fuel | 1 hour at 23°C | No effect | No effect | No effect | No effect |
| SAE Motor Oil | 24 hours at 23°C | No effect | No effect | No effect | No effect |
| Antifreeze/Water (1:1) | 24 hours at 23°C | No effect | No effect | No effect | 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.

For best results application should be performed in a clean dry workshop at an ambient temperature of 18°C - 24°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.