

# Heat-Activated Films

Heat-activated adhesive films are conquering a rising number of application areas. These adhesive films can be produced in single- and multi-ply versions.

The hot-melt adhesives used by B+K reveal a thermoplastic character and offer impressive, high bonding speeds and fast further processing options.

## B+K solutions

**The following substrates are used to produce laminated sheets:**

Wood

Aluminium

Plastics

Decorative substrates

These laminated sheets are used, amongst other applications, as sandwich elements for buildings, but also as inserts for means of transportation and special constructions.

# Surface Protection Films

Bischof + Klein surface protection films are tailored precisely to serve your individual requirements and meet the highest of standards. B+K develops and produces self-adhesive and self-adhering surface protection films for virtually all applications.

Self-adhesive films; equipped with various adhesives; individual adhesion level based on the type of adhesive, recipe and specific coat weight

Corona pre-treated films; lamination onto smooth surfaces by applying heat

Co-extruded, adhesive films; adhesion by means of PE copolymer

Co-extruded, adhesive films, one side of which is equipped with adhesive layers specifically developed by B+K; adhesion at room temperature; individual adhesion value control via recipes; highly-suitable for thermal forming

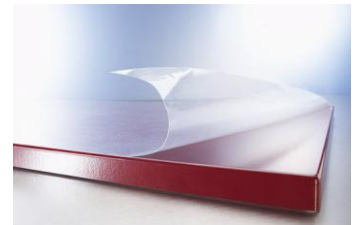
## Protection films | Furniture Surfaces

**Without protection films, modern, durable furniture surfaces would be impossible to produce in many cases. HPL, CPL and laminated furniture films create these high-quality surfaces.**

### B+K solutions

Often, the protection film has to protect smooth, matt-finished or structured surfaces, but also has to undergo a temperature-intensive post-forming process.

Practical tests on our customers' furniture surfaces insure that an optimal product is selected. Innovative manufacturing technologies guarantee a constantly high level of quality. This gives our customers the security of meeting even the most demanding requirement profiles.



## Protection films | Glass & Mirrors

**There are few products which are as susceptible to transportation damage as glass and mirrors. B+K has therefore developed a wide range of different protection system products to protect these surfaces during transportation and installation or, in certain cases, permanently**

### B+K Solutions

#### Mirrors:

Splinter protection films adhere permanently onto the rear side of mirrors, preventing them from dropping to pieces or splintering on breaking.

#### Windows:

To protect window panes, B+K has developed films which do not leave adhesive residues behind even following long periods of exposure to the elements outdoors.

#### Coated Glass:

Coated types of glass are used for various markets. High-quality adhesive and adhesive-free film systems cover the entire spectrum, from low to high adhesion, with neutral impact on the highly-sensitive coatings.



## Protection films | Metals

**Innovative product solutions from B+K protect aluminium, stainless steel or painted/coated metal surface structures during the production process and transportation. Our product portfolio contains conventional adhesive products, but also adhesive-free solutions.**

### B+K solutions

#### Aluminium:

Innovative product solutions from B+K protect unfinished, smooth anodised and matt-finished, anodised surface structures during the production process and transportation.

#### Stainless Steel:

B+K offers self-adhesive protection films as optimal protection for smooth, brushed or formable surfaces, even under the most difficult of conditions such as cutting, drilling, milling, etc.



## Painted Metals:

Sandwich panels and coil coating are just two examples of applications for painted metals. Specially designed adhesive or adhesive-free film systems offer extraordinary protection during manufacturing, production, transportation and application.

## Protection films | Optical Applications

**Graphic and electronic applications, in particular, demand high-purity and absolutely residue-free films. B+K has developed pre-defined processes to produce both high-quality adhesive-free and adhesive films.**

### B+K Solutions

Customer-specific solutions are created thanks to competence, experience and flexibility. The advantage to our customers in this market segment are the diversity and constant high quality of our surface protection film portfolio:

- LCD- and Plasma-Screens
- Mobile telephones und PDAs
- Optical films and plastic sheets
- Sensitive metal surfaces
- Specific clean room applications



## Protection films | Plastic Sheets

**Whether process or transportation protection, adhesive or adhesive-free systems, smooth, matt-finished or coated surface structures, thick plastic sheets or thin plastic films, coloured or printed, B+K comes up with solutions for your demanding requirement profiles and technical circumstances.**

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### B+K solutions

B+K is the industry's pioneer in the trend towards adhesive-free protection film systems. The adhesion level can be individually steered by internally developed recipes and production processes. This application-specific adhesion is essentially achieved regardless of the relevant lamination temperature.

### Thermal forming

B+K offers adhesive-free protection film systems for plastic sheets which can be thermally formed. These high-quality films guarantee a correspondingly high level of adhesion both before and during thermal forming. Following exposure to heat, the adhesive properties are reduced to a low level for ease of removal.

This guarantees optimal protection before and during the thermal process, combined with very simple removal of the film.



## Protection films | PVC Window Profiles

**Extruded PVC window profiles are constantly gaining in market share in comparison with alternative materials.**

B+K offers tailor-made solutions for both smooth and structured surfaces or those equipped with decorative film, regardless of whether this involves narrow or wide reels, interior applications or exposure to the elements, coloured or printed films, with low or high adhesion. Different adhesive systems offer customer-specific solutions to meet the highest standards of quality.

One additional function of surface protection films is their use as advertising and information media. Our printing options enable virtually any desired design. To ensure that the printed image is abrasion-resistant and scratch-proof, we equip our printed films with a high-quality lacquer or embed the print in a special laminate.



### Transport hoods

The profiles themselves can be optimally packaged and sealed by using a transportation hood developed by B+K. The laminate structure offers comprehensive protection against contamination and storage damage, and guarantees effective removal thanks to the zip process. The transportation cover is reusable packaging, and meets both ecological and economic requirements. The transportation covers can be converted and adapted to customers' specific needs, and can be reused several times.

## Technical Laminates

Laminates enable the combination of diverse materials' positive characteristics (aluminium, PE, PET, OPP, non-woven materials, etc.). Due to the diverse possible combinations, laminates are available for almost every requirement profile.

Requirements pertaining to oxygen, gas or light barriers and tensile strength, rupture strength and sealability can be met with this technology.

### B+K solutions

B+K products are used in a multitude of applications:

- Roof Sealing
- Automotive
- Aluminium Packaging

## Technical POSSIBILITIES

### Extrusion coating:

Front and rear coating

Width of 1,600 mm

Co-extrusion (combination of two different functional layers)

Up to 300 g / m<sup>2</sup> in one operation, depending on material

### Extrusion lamination:

Multi-ply, up to 6 layers in one operation

### Adhesive coating:

Up to a width of 2,800 mm

### Adhesive lamination:

Multi-ply, up to 3 layers in one operation

width of 1,800 mm

Solvent-based and solvent-free hot melt adhesives up to an application weight of 30 g

Inline printing

Laminate materials from B+K substitute conventional materials and give rise to products with completely new characteristics for new applications. The great diversity of these functionalised materials' characteristics offers numerous application options.

## Possible substrate materials

Films

Paper

Non-woven materials

Felts

Aluminium

Foams

Woven materials

Further flexible laminate materials

## Possible coating materials

Polyolefins

Ionomers

Copolymers

Polyurethanes (TPU)

Polyesters

Resins



## Laminates | Furniture

**Laminating materials from B+K replace conventional materials and render products, with completely new characteristics, possible for new fields of application.**

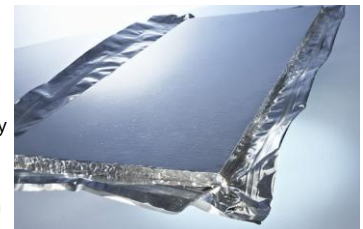
Application examples for technical composite films can be found in the furniture industry. Our engineers, together with you, develop the custom-made solution for your individual requirement. The optimum product is achieved through a combination of extrusion and adhesive lamination.

## Laminates | Insulation

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## Laminates | Roof Construction

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