



Bayfol® Platilon®

# Hotmelt adhesive films.

Excellent bonding properties and durability  
for textile and industrial applications.



Project and Job Number  
**CR17856\_H287738\_P684722**

Publication  
**General Magazine**

Insertion Date

Contact

Client  
**Covestro**

Market  
**Germany**

Operator  
**dennis glissmann**

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**x mm**

Trim Box (h x w)  
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Bleed Box (h x w)  
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Date & Time  
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Proofreader

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Account Manager

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Thermoplastic hotmelt films combine high-tech properties and versatility

Thermoplastic Polyurethane (TPU) bridges the gap between hard thermoplastics and rubber. It can be deformed under tensile load and reformed to its original shape afterwards. Thanks to its molecular structure, TPU can be stretched when heated, melted, and molded all over again. These soft and elastic films enable uncomplicated fabric lamination, light management, weight saving, and volume minimization. Our portfolio of TPU films includes a variety of **Bayfol®** and **Platilon®** product grades, which show excellent durability and processability.

Covestro hotmelt adhesive films

Covestro aims to provide high quality solutions to meet the different demands of our customers. We continuously improve the performance of our products and offer a broad portfolio of hotmelt adhesive films. These high-performance thermoplastic films are available for a broad range of industry applications, from textiles to furniture, from the automotive industry to safety glass or even to wind power plants.

Possible applications for hotmelt films



Construction

- Awning & sunshades
- Roof underliners
- Pipe relining



Textiles

- Textile lamination
- Seam sealing
- Protective clothing



Mobility

- Seating
- Roof sunshades
- Trims



Industrial

- Conductive fabric
- Leading edge adhesive for wind blades
- Consumer electronics, e. g. mobile phone cases

Our solutions: your advantage

Industrial bonding with hotmelt adhesive films is a very flexible technique. Without conditioning lines in the manufacturing process, hotmelt films can be simply handled. The raw materials and adhesive properties of hotmelt films bring key advantages and allow a continuous bonding of large surfaces. The films can be processed in a highly automated and fast production technique. Several different sorts of materials, from textiles and non-woven to foam can also be bonded with hotmelt films.

A major benefit of our hotmelt films is their processability. They are easy to handle and the supply via roll material allows constant thickness distribution and smaller lamination lots. Our films are available in a variety of thicknesses and can be effortlessly processed by heat activation. Additionally, our hotmelt multilayer films combine different material properties in one product, thereby maximizing cost savings while minimizing effort. On top of this, our hotmelt films are free of solvents and plasticizers.

The activation of the hotmelt films is achieved by heat, ultrasonic, hot air, heat impulse, infrared radiation or high frequency. This allows different technologies for processing. The cooling and solidification of the adhesive takes place within a few seconds. This means that the bonded products are immediately resilient and ready for further possible processing.

Key benefits

- **Easy to process:** applicable over a wide temperature range
- **Versatile:** works with a broad range of materials in different heat activation processes and wide temperature range
- **Enhanced thermal bonding properties:** low melting temperature aids fast bonding
- **Lightweight:** thin TPU film (25 µm) contributes to flexible materials
- **Efficient processing:** hotmelt films provide an even and seamless adhesive coverage
- **TPU film properties:** durable & tear-resistant, free of solvents and plasticizers



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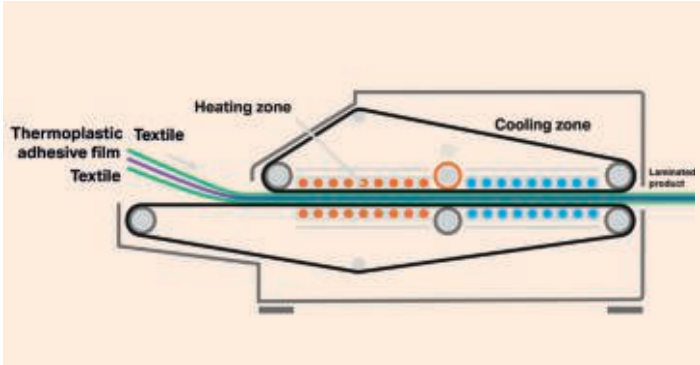
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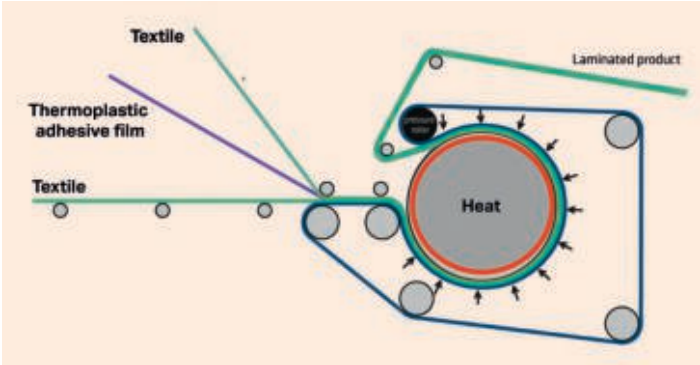
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Flatbed lamination

A bottom textile, a middle hotmelt film and an upper textile will be bonded together by exposing those layers to heat. The hotmelt film will be activated in the heating zone and bonds instantly with the outer layers after cooling down. The hotmelt film ensures an evenly distributed adhesive, which results in an excellent laminated product that is ready for further processing.



Calender

Hotmelt films are used for hot calender lamination. Bottom textile, hotmelt film and top textile are laminated at the same time. The melting properties of the films provide a wide process range to support high lamination speeds.

Product overview: selection of films for hot lamination

Platilon® Hotmelt	Softening range	Properties	Application
H2	110 °C – 120 °C	Excellent adhesion to a broad range of materials, such as polyamid fabric, cotton fabric and wood, low melting point, barrier to plasticizers	Sealing stripes, laminate of glass and aluminum, noise absorption, conductor tracks
H5	105 °C – 120 °C	Good adhesion to fabrics, such as polyester and cotton, weldable and wash resistance	Sealing stripes, textile lamination
HU2105C	105 °C – 145 °C	Excellent adhesion to a broad range of materials, such as aluminum, polyester fabric, cotton fabric and poly-carbonate, good welding to PC and other substrates	Elastic bonding
U2100	140 °C – 160 °C	Good adhesion, soft, high flexibility, medium temperature stability	Barrier in pipe sanitation, seam sealing, hot lamination
U2102	150 °C – 175 °C	Good adhesion, soft, high flexibility, higher temperature stability	Barrier in pipe sanitation, seam sealing, hot lamination

Bayfol® Hotmelt	Softening range	Properties	Application
LR 5902	180 °C – 200 °C Curing temp. from about 35 °C	Cross linking film, excellent adhesion, up to 200°C temperature stability, low lamination temperature	Protective clothing, leading edge protection, thermo-sensitive laminations

Platilon® HL (High/Low)	Softening range	Properties	Application
HL9074	Low 85 °C – 130 °C / High 155 °C – 175 °C	Adhesion to felt and fabric, elongation, good adhesion to PU foam, tear and chemical resistance	Liner part for in pipe sanitation, noise absorption, foam skinning, seam sealing
HL9093	Low approx. 110 °C / High approx. 160 °C	Adhesion to felt and fabric, elongation, good adhesion to PU foam, tear and chemical resistance	Seamless garments
HL9103	Low 65 °C – 90 °C / High 155 °C – 185 °C	Breathability, mechanical stability after lamination, low melting layer, one side bonding to olefins	Roof lining

Redefining possibilities: continuous innovation in TPU hotmelt film technology

Our ongoing effort to develop new products is directly responsive to evolving market trends and requirements. These advancements not only open up new opportunities, but also showcase our commitment in the industry excellence. From pipe relining solutions in construction to textile applications, such as seam sealing and labels, our innovative products demonstrate versatility and adaptability. Explore our extensive hotmelt portfolio and contact us to discuss how our tailored solutions can meet your specific requirements.



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