



ROLL COVERING FOR THE PACKAGING INDUSTRY LAMINATION AND COATING

Elastomer covered rollers generally play a dominant role in the lamination process. Depending on the materials and technologies applied, Hannecard proposes different covering materials and innovating concepts, both reliable and assuring maximum performance.

YOUR REQUIREMENTS

- Avoid lamination defects (blisters, folds...)
- Abrasion resistance
- Perfect geometry
- Anti-stick properties, neutral behaviour in contact with the film or paper
- Resistance to possible high loads

LAMINATION TYPES

The lamination process makes it possible to unite two or more layers of material together. This process generally falls into two major categories:

- **Cold lamination**, also called coating-lamination
- **Hot melt lamination**, also called thermal lamination or extrusion-lamination

Cold laminators use pressure sensitive adhesives to bound the lamination film. Cold laminators are used for heat sensitive materials. At first a glue is applied on the carrier at a low or moderate temperature.

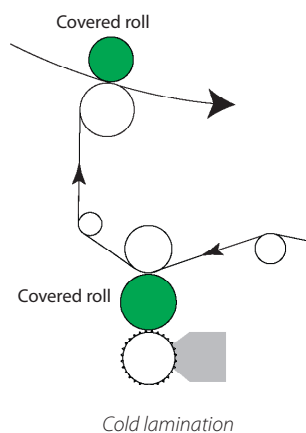
This glue can be water or solvent based. Generally, the glue is activated in a dryer tunnel using temperature or UV-radiation. By applying pressure, a covering substrate is then applied.

In case of hot lamination, the carrier material is covered by an extruded 'glue' (plastic film) at high temperature. In this case, 100% of the covering material is used, without loss of solvents. As opposed to cold lamination, a drying tunnel is not needed for hot melt lamination.

COLD LAMINATION (or Coating-Lamination)

Coating-lamination or cold lamination is usually applied for the production of flexible packaging.

The process can happen through either water based adhesive or solvent based adhesive. The adhesive is applied by means of a direct or indirect (offset) coating machine. A rubber covered roller can be used as a glue applicator or as pressure counterpart.

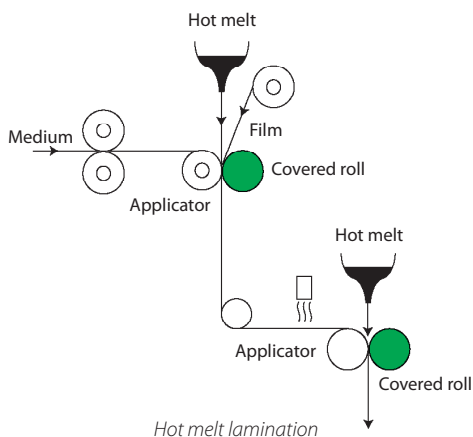


Transfer or Applicator Roll

Application	Solution	Characteristics
Solvent based glue	MultiCoat-SB Green - Rubber 35-65 shore A	<ul style="list-style-type: none"> • Excellent resistance to solvents, alcohols, acetates and cetones • Good abrasion resistance • Temperature resistance : Maximum 120 °C
Water based glue	MultiCoat-SB Green - Rubber 35-65 shore A	<ul style="list-style-type: none"> • Good abrasion resistance • Temperature resistance: Maximum 130 °C
	MultiCoat-XP Green - Rubber 50- 60 shore A	<ul style="list-style-type: none"> • Excellent abrasion resistance • Longer lifetime • Temperature resistance: Maximum 130 °C

Pressure Counterpart

Application	Solution	Characteristics
Solvent based glue	MultiGraf-SB Green Rubber 75 & 80 shore A	<ul style="list-style-type: none"> Excellent resistance to solvents, alcohols, acetates and cetones Good abrasion resistance Temperature resistance : Maximum 120 °C
	MultiGraf-SB-AS Black Rubber 75 & 80 shore A	<ul style="list-style-type: none"> Antistatic version Excellent resistance to solvents, alcohols, acetates and cetones Good abrasion resistance Temperature resistance : Maximum 120 °C
Water based / Polymer based glues	MultiGraf-SB Green Rubber 75 & 80 shore A	<ul style="list-style-type: none"> Good abrasion resistance Temperature resistance : Maximum 120 °C
	MultiGraf-SL Grey Rubber 85 shore A	<ul style="list-style-type: none"> Very good temperature resistance: up to 140 °C Non-stick properties Easy to clean Longer lifetime



HOT MELT LAMINATION (or Extrusion-Lamination)

The basic principle of hot melt is to extrude a film directly onto the carrier, which can be plastic, aluminium or paper.

For this technology, a drying tunnel is not needed, which results in cost and space savings.

The versatile nature of extrusion-lamination enables the use of the materials for a wide variety of applications, including flexible packaging, tube packaging, board packaging for beverages, food and consumer products, but also table clothing and floor coverings. Hot melt lamination is also widely used to produce labels and adhesives.

For the covered roll positions in this process, we can offer a wide range of solutions:

Type	Solution	Characteristics
Standard	NipFoil-XP Grey/Green Rubber 70-90 shore A	<ul style="list-style-type: none"> Excellent mechanical properties Very good resilience Temperature resistance up to 140 °C Not specifically anti-adherent – can be combined with Teflon® strips*
Advanced	Vulcan Red Rubber 70-80 shore A	<ul style="list-style-type: none"> Temperature resistant up to 250 °C Specific non-stick properties
Special	BupFoil-XP Grey Rubber 65+90 shore A	<ul style="list-style-type: none"> Temperature resistant up to 200 °C Specific non-stick properties Double-layer solution to guarantee improved mechanical properties & resilience
	Lotus-PFA or Lotus-FEP Black Rubber	<ul style="list-style-type: none"> Two-layer solution with Teflon® top layer Non-stick surface Heat resistance up to 250°C (PFA version) Complete chemical resistance Remaining elastic properties Suited for food processing Thickness: 0,55 to 1,5 mm

RELATED DOCUMENTS

- Solutions - 'Cast Extrusion'
- Product Information - 'Lotus'

MORE INFORMATION?

For more information, please contact your local Hannecard partner or visit our website at: www.hannecard.com

* Teflon® is a registered trademark of DuPont