HANNECARD YOUR ROLLER EXPERT

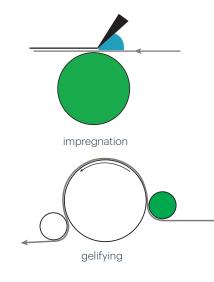


YOUR REQUIREMENTS

- Resistance to different plasticizers
- Temperature resistance
- · Adapted surface profile and crown
- · Lifetime related to format changes
- Abrasion resistance

OUR ADVANTAGES

- Resistance to the latest generations of plasticizers
- Good abrasion and tear resistance
- High precision finishing
- Possibility to supply parabolic or hyperbolic profile
- Coverings with specific surface properties



ROLLER COVERING FOR PVC & OTHER SOFT PLASTICS PROCESSING

The transformation of soft filled plastic types as PVC, PVA, PE and other technical plastics for applications as flooring, dashboard clothing, wall paper, artificial leather or pool lining, rests on high technology and delicate processes, which are in constant evolution.

While forming or laminating the sheet, as well as printing, embossing, coating or varnishing, the product quality depends highly upon multiple elastomer covered rolls.

The Hannecard group has developed different products that are reliable and guarantee excellent results and long lifetimes for each specific application. These products meet the requirements defined by the latest generations of plastic materials, plasticizers and technologies.

IMPREGNATION & GELIFYING

The impregnation process is used to cover the carrier material (often a glass membrane with the plastic gel. For the production of floor coverings the hardening or foaming is often done on gelifying drums.

For the rubber covered counterparts, the choice of the rubber quality and the surface finish are of great importance. Hannecard proposes following possibilities :

Solution	Covering	Characteristics
Standard Solutions	GelForm-S Black 50-80 shore A	 Good abrasion resistance Excellent resistance to classic plasticizers Resistant to temperatures up to 120 °C
	GelForm-SP Grey 40-80 shore A	 Impregnation counterparts Non staining Good physical properties
	GelForm-XP Grey 40-80 shore A	 Excellent resistance to classic plasticizers Resistant to temperatures up to 180 °C Non-stick properties
Advanced Solution	Lotus-FEP Lotus-PFA Black	 Double layer covering Particular anti-stick properties Resistant to temperatures up to 200 °C Improved abrasion resistance (For more details see <u>product leaflet 'Lotus'</u>)
Specific Solution	Meteor-CH Black 60-80 shore A	 Excellent resistance to all plasticizers, including light fuels Resistant to temperatures up to 200 °C Good abrasion resistance



CALENDERING - LAMINATION - HOT EMBOSSING

Depending on the product and the machine type, Hannecard proposes following possibilities :

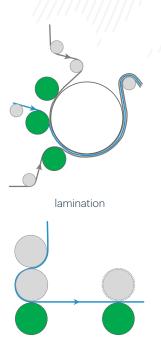
Solution	Covering	Characteristics
Standard	GelForm-S Black 50-80 shore A	 Excellent resistance to classic plasticizers Resistant to temperatures up to 120 °C Pressure resistance: max. 50 daN/cm'
Advanced	GelForm-XP Grey 40-80 shore A	 Excellent resistance to classic plasticizers Resistant to temperatures up to 180 °C Pressure resistance : max 30 daN/cm' Non-stick properties
High performance	Vulcan Red 60-80 shore A	 Improved load resistance at high temperature Pressure resistance : max 40 daN/cm Resistant to temperatures up to 200°C
	GelForm-HP Red 70 shore A	 Improved chemical resistance Improved abrasion resistance at high temperature Resistant to temperatures up to 200°C
Specific	Lotus-FEP Lotus-PFA Black	 Double layer covering Particular anti-stick properties Improved abrasion resistance Pressure resistance : max 50 daN/cm' (For more details see product leaflet 'Lotus')
	OptiGloss Plus Green 65 shore A	 Structured rubber cover Embossing counterparts for gloss control or anti- blocking
	Meteor-CH Black 60-90 shore A	 Excellent resistance to all plasticizers, including light fuels Resistant to temperatures up to 200 °C Good abrasion resistance Pressure resistance : max 50 daN/cm⁻
	Hannetherm-XP Brown 70-90 shore A	 Polyurethane solution Resistant to temperatures up to 120°C Extreme lifetime Excellent resistance to oily plasticizers as DOTP Pressure resistance : max 100 daN/cm[*]
Metal spray solution (Tungsten Carbide)	Hannespray W Hannespray W Plus	 Smooth & rough embosser rolls, specifically for sport courts and flooring Roughness 0,1 - 6 µ For corrosion resistant guiding and traction rollers

* depending on the hardness and the roll diameter

PRINTING

Especially for floor covering and wall paper, multiple colours are used to print the product by means of an adapted rotogravure technology. Hannecard proposes different covering qualities that can be obtained in different hardnesses. Also rubber covered composite sleeves, suited for NIPCO technology, can be provided.

Solution	Covering	Characteristics
Standard	GelPrint-S Black/Grey 50-80 shore A	Good resistance to solventsStable nip pressure
Advanced	Lotus-FEP Lotus-PFA Black	 Double layer covering Ink does not adhere to the surface (self cleaning) (For more details see <u>product leaflet 'Lotus</u>')



calandering





Hannecard offers different possibilities (both rubber and polyurethane) for applicator, counterpress and blade rollers, depending on the technology used for applying the PVC, PU or other finishing layers.

Solution	Covering	Characteristics
Rubber	MultiCoat-SB Green 35-65 shore A	Good resistance to polar solventsHigh coating efficiency
Polyurethane	Monkal-4 Sand coulour 40-65 shore A	 Double layer covering Suited for water based coating High abrasion resistance Excellent transfer properties and wettability
	Monkal-5 Blue 15 & 30 shore A	 Suited for water based coating For coating on structured surfaces (replaces foam rubber) High abrasion resistance & lifetime

COLD EMBOSSING

In this case, the embossing is conducted on a finished, often varnished product. Because of the lower process temperatures, more important mechanical loads are applied. Hannecard proposes :

Solution	Covering	Characteristics
Recommended Solution	GelPress Black 65-80 shore A	 Good resistance to classic plasticizers up to 60 °C Resistant to temperatures up to 100 °C Pressure resistance : max 80 daN/cm depending on hardness and roll diameter Can be very smoothly ground

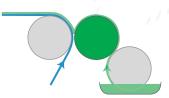
MECHANICAL ROLLERS

Floor covering and other PVC-conversion lines use different coated rollers for driving, traction, deflection and winding. Since the products are abrasive and sometimes chemically aggressive, Hannecard developed improved solutions with a long lifetime.

Solution	Covering	Characteristics
Standard	GelForm-SP Grey 40-80 shore A	 Good mechanical and chemical properties Non-staining Good plasticizer and varnish resistance
	GelForm-S Black 50-90 shore A	 Good abrasion resistance Good load and traction resistance Good plasticizer resistance
	HanneStar Beige 65-90 shore A	 Good mechanical properties and abrasion resistance Good grip Recommended for rollers in the winding section
Advanced	Kaltryl Brown 70-90 shore A	 Outstanding mechanical properties, tear and abrasion resistance Good plasticizer and solvent resistance Maximum lifetime

MORE INFORMATION?

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



coating