

## LOTUS

# THE VERSATILE TEFLON® BASED ROLLER COVERING

The versatility of Teflon® makes it the preferred material for a multitude of industrial applications. One of these applications is our in-house developed roll covering named LOTUS, which refers to the stunning non stick and self cleaning properties of the Lotus leaf.



By combining its non stick surface, heat resistance, almost total chemical inertness, mechanical superiority, and a low coefficient of friction, the **LOTUS** covering disposes of a set of unique properties that makes it – as for many applications – unbeatable by any other covering material.

### **Non stick surface**

Thanks to the extreme low friction properties of Teflon®, sticking is avoided, which considerably reduces downtime for cleaning. This easy cleaning process reduces the frequency, amount and severity of cleaning chemicals – a benefit for the environment!

Moreover, when producing different web lengths, you are allowed to use the same roll covering, as there is no longer need to change to a different sized roll covering or change the Teflon® strips.

### **Heat Resistance**

Lotus coverings exist in 2 variants: The FEP fluoropolymer version that resists up to 200° C and the FPA version that can operate continuously to temperatures of up to 250°C. Because of that, LOTUS serves as a high performance alternative to conventional silicone coverings.

### **Mechanical superiority**

Compared to silicone coverings, LOTUS also provides superior and exceptional mechanical properties that revalue this covering quality as an outstanding solution for pressure rolls for PE and PP hot melt lamination processes. Lotus FEP has a tensile strength that is twice as high as a silicone coverings's. The PFA version performs even better: three times as much! It is crystal clear: a LOTUS covering simply lasts longer!

### **Chemical Resistance**

Teflon® is normally unaffected by any chemical substance or cleaning solvent. For this reason, LOTUS covered rolls can last many times longer than conventional rubber covered rolls when applied under aggressive chemical conditions like textile bleaching.

Another example is the vinyl flooring production: because of its chemical resistance, unlike classic EPDM coverings, Lotus is unimpaired by plasticizers that are being used in vinyl coaters.

### **Protection of your delicate materials**

Thanks to its mirror-lie surface finishing ( $R_a < 0.4$ ) Lotus, coverings prevent scratches or plies on your fine or delicate materials. As such, Lotus is the preferred covering material for the production or lamination of thin flexible films and foils.

### **Remaining elastic properties**

Compared to pure Teflon coatings or coverings, our Lotus covering offers the elastic properties that are inherent to a conventional rubber. These properties are necessary to obtain an excellent squeezing or printing job.

### **Be sure, it's pure...**

Unlike some other polymers, Teflon® contains no additives to compromise the flavour or contaminate products. Its pure Teflon® surface, therefore, makes a LOTUS covering suitable for producing food, drugs or food and drugs suited packaging materials.

### **What makes LOTUS so unique:**

Applied to a rubber covered roll, LOTUS is a 100 percent industrially proved sealed covering with outstanding properties. The Teflon® is secured over the entire length of the covered roll, as opposed to Teflon® strips that require a regular and thus more expensive change.

### **ADVANTAGES :**

- Non-stick surface
- Heat Resistance
- Complete chemical resistance
- Remaining elastic properties
- Suited for food processing

<sup>(1)</sup> Teflon® is a registered trademark of DuPont

## TECHNICAL CHARACTERISTICS

- Maximum temperature resistance:
  - 250° C (LOTUS PFA)
  - 200° C (LOTUS FEP)
- Maximum line pressure: 30 kg/cm
- Friction coefficient: 0.04
- Typical Hardness: 75 +/- 5 shore A (*other on request*)
- **High precision finishing** possible:
  - Ra < 0.4 µm
  - **cilindricity max 5/100 mm**
- Tensile strenght (*at break*):
  - 27.5 MPA (LOTUS PFA)
  - 20.7 MPA (LOTUS FEP)
- Colour: Black

## TYPICAL APPLICATIONS

- Pressure back-up rolls for hot melt applications for producing flexible packaging, liquid packaging, adhesives, tapes, etc..
- Impression rolls for rotogravure printing of vinyl and other high plasticizer doped materials as plastic plates.
- Glue Rolls
- Low friction rolls such as high speed paper carrying roll
- Squeegee, Foulard or bowed spreader rolls for textile wet finishing
- Bowed spreader rolls for paper presses, located between the size press and the coating station
- Ink Decker nip rolls for pulp production out of recycled paper.

## OPERATING INSTRUCTIONS & PRECAUTIONS

- Do not apply Teflon strips on your Lotus covering
- **LOTUS can be cleaned easily** with almost all common cleaning solvents. Even cleaning with pressured water is possible.
- **Do not dispose LOTUS covered rolls with the roll face on the soil;** this might destroy the roll surface.

## MORE INFORMATION?

For more information, please contact your local Hannecard partner or visit our website at : [www.hannecard.com](http://www.hannecard.com)