

SOLUTION DATA SHEET

Unique Pearlbond™ 300 Series, Soft Solutions for Hot Melt Adhesives



Markets	Textile lamination, footwear, leather goods, electronics and transportation and elastic seam tape.
Polymer	Pearlbond™ thermoplastic polyurethane (TPU)
Key Benefits	<ul style="list-style-type: none"> • Plasticizer-free, soft material (approx. 50-68 Shore A) • Soft touch, good haptics • Improved processability and wide wettability • Good adhesion properties at low temperatures • Rigid system modifier

The textile lamination market has always required polymers with a soft feel. Until recently, the only technology available with this characteristic was plasticized TPU. The challenge for the TPU industry was

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to eliminate the plasticizer while maintaining the low hardness and tack-free properties of the TPU. This challenge has been overcome by Lubrizol technology: Tin- and wax-free Pearlbond 300 series combines all the demands from the industry: A very soft, plasticizer-free material with good processability, and no residual tack.

The soft, adhesive melting temperature of Pearlbond™ 300 TPU series fills the gap between crystalline and amorphous TPU

This novel TPU range is a powerful thermobonding option for designers and manufacturers who want to convert their products into unique solutions. The advanced science of this technology, combined with recent advances in machinery and the increasing sophistication of textiles, delivers benefits such as an agreeable soft touch texture, absence of residual surface tackiness, excellent processing properties and good grip/anti-slip properties.

Pearlbond™ 301, Pearlbond 302 and Pearlbond 305 solutions provide:

- Superior soft hand feel in textiles (jackets, shirts, skirts, dresses, trousers, pullovers, shirts, beach towels, table linen, curtains, leather, synthetic leather, Kevlar, ABS, and PVC, among others)
- Good adhesion to fabrics (e.g.: cotton, acrylic, nylon, silk and polyester) and
- Good wash resistance.

The latest addition is **Pearlbond 360**, a breathable polymer. The portfolio available can be seen below:

	Pearlbond™ 301	Pearlbond™ 302	Pearlbond™ 305	Pearlbond™ 360
Shore A hardness	52	55	64	68
Tensile Strength (MPa)	9	14	24	6
Elongation @ break (%)	1050	900	810	915
Modulus @ 100% Elongation	1.1	1.4	2.2	2.0
Activation Temperature (°C)	≤100	≤110	≤150	≤120
Wash Resistance (°C)	<60	<70	≤100	≤100
Unique Features	Soft touch. Adapts to body movement	Low Energy stretching. Good Wash resistance	Hydrolytic, heat & chemical resistance. Good elastic recovery	Hydrolytic resistance. Good elastic recovery

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These innovative solutions can be processed across a wide temperature window. The new Pearlbond offering provides elastomeric performance together with the appropriate recovery. This results in pleasant-to-wear garments.

Typical industries and applications that can benefit from the Pearlbond™ 300 TPU series include:

- Textile lamination
- Automotive
- Footwear
- Electronics
- Outdoor equipment
- Furniture
- Synthetic leather & Leather
- Elastic Seam tapes
- Heat transfer Labels



For more information, please visit our web site: www.lubrizol.com/Engineered-Polymers

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