

Technical Data Sheet

PEARLBOND™ 305 is a high performance aromatic polyester-based thermoplastic polyurethane (TPU) for use in hot melt adhesives applications (including film & sheet). This is a very soft plasticizer-free TPU with excellent low temperature flexibility. **PEARLBOND™ 305** is available in colourless translucent granules.

CHARACTERISTICS

Property	Test Method	Typical Values *
Density @ 20°C	ISO 2781 (ASTM D-792)	1 - 1.1 g/cm ³
Shore Hardness	ISO 868 (ASTM D-2240)	64 ± 3 A
Softening range	MQSA 70A	155-165 °C
Melting range	MQSA 70A	180-190 °C
Tensile strength	ISO 527 (ASTM D-412)	4.7 MPa (682 psi)
Elongation @ break	ISO 527 (ASTM D-412)	450 ± 50 %
Modulus @ 100% elongation	ISO 527 (ASTM D-412)	2.4 ± 0.2 MPa (348 ± 29 psi)
Modulus @ 300% elongation	ISO 527 (ASTM D-412)	4.0 ± 0.2 MPa (580 ± 29 psi)

* These are typical values & should not be used for establishing specifications.

APPLICATIONS

PEARLBOND™ 305, a 64 Shore A Polyester-Type TPU, has been developed for applications where superior elastic performance characteristics are required. Among the critical performance parameters are:

- Softness.
- Excellent set (hysteresis) performance - Improved elasticity and resilience.

Superb elastic recovery

WORKING INSTRUCTIONS

For optimum results, previous drying of the product during 2-3 hours at 90-100 °C is advisable, in a hot air circulatory, vacuum or desiccant-air dryer.

EXTRUSION

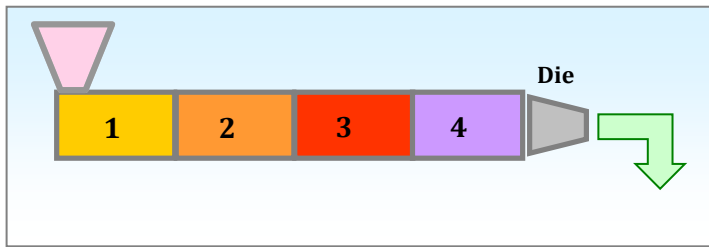
The suggested processing-temperature profiles for film extrusion (flat films) are depicted in the figure below:

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Zone 1	190°C (374°F)	200°C (392°F)
Zone 2	200°C (392°F)	210°C (410°F)
Zone 3	210°C (410°F)	220°C (428°F)
Zone 4	200°C (392°F)	210°C (410°F)
Die	190°C (374°F)	200°C (392°F)

LD ratio.- 25:1-30:1 **Cooling.-** Air, **Screw.-** 2:1- 3:1, **Speed.-** 20 rpm, **Thickness Die.-** 0,2 mm.

HEALTH AND SAFETY

A safety data sheet on **PEARLBOND™ 305** is available, with all information related to safety. The usual safety practices in the handling of chemicals should be observed, i.e.: good ventilation in the working area, gloves and protective goggles.

STORAGE

PEARLBOND™ 305 must be stored in a cool (15–25°C) and environment prior to being processed. Standard practice of consuming resin on first-in first-out basis should be employed.

Our **TECHNICAL SERVICE** will answer any inquiries about our product and its applications.

For further information refer to **Lubrizol Advanced Materials processing guides**.

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