

**Technical Data Sheet**
**Type:** Polycaprolactone Copolyester Thermoplastic Polyurethane (TPU)

**Uses:** Extrusion, Solution Cast Films; Compounding with PVC

**Special Feature:** Low Melting Point with Excellent Transparency, Elasticity and Ease of Processing, Improved Adhesion to Polar Surfaces

**CHARACTERISTICS**

Physical Properties	Value (Metric)	Unit	Test Method
Appearance	Translucent		Visual
Shore Hardness	70	A	ISO 868
Specific Gravity	1.16	g/cm <sup>3</sup>	ISO 2781 (ASTM D-792)
Softening range	100-110	° C	MQSA 70A
Melting range	120-130	° C	MQSA 70A
Activation temperature	100	° C	LA-17
Melt viscosity (160° C, 2.16 Kg)	890	Pa.s	ISO 1133
Tensile strength	20 (2900)	MPa (psi)	ISO 527
Ultimate elongation	750	%	ISO 527
100% Elongation	3 (435)	MPa (psi)	ISO 527
300% Elongation	4 (580)	MPa (psi)	ISO 527
Tear Strength	6.84 (286)	kg/mm (lb./in)	Graves ASTM D-624 (Die C)
Taber Loss	45	mm <sup>3</sup>	DIN 53,516
Glass Transition	-30 (-22)	° C (° F)	DIN 51,007

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

**Regulatory Status:** None

**MATERIAL PREPARATION**

- Material must be dried at 158-176° F (70-80° C) for 1 to 2 hours.
- It is recommended to be dried in a desiccant, hot air circulatory or vacuum type dryer. The target dew point should be negative 40° C.
- Depending upon the processing technique, the maximum moisture level should be 0.02 percent.

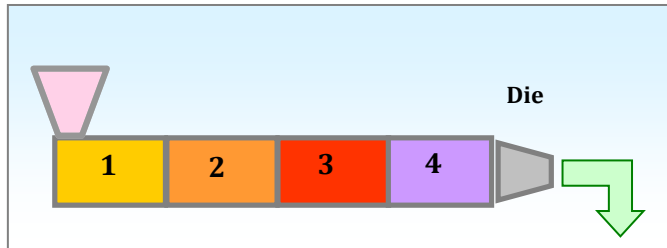
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## EXTRUSION

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



<b>Zone 1</b>	125° C (257° F)	135° C (275° F)
<b>Zone 2</b>	150° C (302° F)	160° C (320° F)
<b>Zone 3</b>	165° C (329° F)	175° C (347° F)
<b>Zone 4</b>	170° C (338° F)	180° C (356° F)
<b>Die</b>	150° C (302° F)	160° C (320° F)

## HEALTH AND SAFETY

A safety data sheet on **Pearlbond™ DIPP 119** is available, with all safety information. The usual safety practices in the handling of chemicals should be observed, i.e.: good ventilation in the working area, gloves and protective goggles.

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

## STORAGE

**Pearlbond™ DIPP 119** 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.

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