

Technical Data Sheet

Type: Pearlbond™ 12F75UV is a **UV-resistant** standard polyester-based TPU supplied in form of translucent, colourless pellets, featuring a low melting point and very low gel content. Processed by extrusion and compounding.

Uses: Powder, film

SPECIFICATION

Melt Flow Index (190° C / 10 Kg)	40–65 g/10 min	ISO 1133
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CHARACTERISTICS

Physical Properties	Value (Metric)	Unit	Test Method
Shore Hardness	78	A	ISO 868 (ASTM D-2240)
Specific Gravity	1.19	g/cm ³	ISO 2781 (ASTM D-792)
Softening range	130–140	° C	MQSA 70A
Melting range	140–150	° C	MQSA 70A
Activation temperature	130	° C	LA-17
Thermoplasticity	Low		MQSA 68A
Tensile Strength	30 (4351)	MPa (psi)	ISO 527 (ASTM D-412)
Ultimate Elongation	525	%	ISO 527 (ASTM D-412)
Tensile Stress at:			
- 100 % Elongation	4 MPa (580 psi)	MPa (psi)	ISO 527 (ASTM D-412)
- 300 % Elongation	7 MPa (1015 psi)	MPa (psi)	ISO 527 (ASTM D-412)

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

APPLICATIONS

Pearlbond™ 12F75UV is designed for a wide variety of adhesive film applications requiring excellent adhesion in combination with good heat resistance and dry-cleaning resistance. This grade can be both cast extruded and blown.

MATERIAL PREPARATION

For optimum results, previous drying of the product during 1–2 hours at 90–105°C is advisable, in a hot air circulatory, vacuum or desiccant-air dryer.

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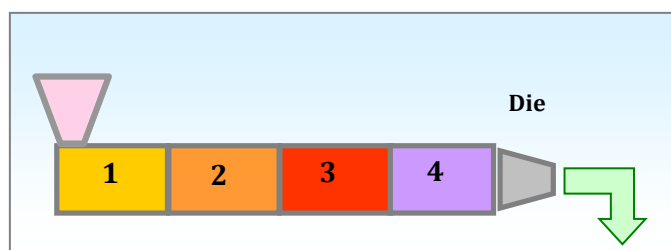
<http://go.lubrizol.com/EP>

EXTRUSION

In accordance with our experience, the characteristics of the extruder that is suitable for processing **Pearlbond™ 12F75UV** are the following:

1. L/D ratio between 25:1 and 30:1
2. The extruder screw must have 3 zones and a compression ratio in between 2:1 and 3:1 (usually, the screws that are used for Polyethylene extrusion give good results).
3. The extruder screw should have a continuous regulation device and a working power higher than for processing other plastics.
4. The speed of the extruder should be low (12 to 60 rpm, depending on its diameter), so as to avoid material degradation due to shearing.
5. The filters used should be disks with holes of 1.5 to 5 mm. (depending on the screw and the die), and screen packs (the no. of meshes /cm² will depend on the end product which is processed), so as to create a pressure built-up.

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



Zone 1	140° C (284° F)	150° C (302° F)
Zone 2	150° C (302° F)	160° C (320° F)
Zone 3	160° C (320° F)	170° C (338° F)
Zone 4	165° C (329° F)	175° C (347° F)
Die	155° C (311° F)	165° C (329° F)

Type- 30/25d (l/d = 25:1), **Cooling** - Air, **Screw** - 3:1, **Speed** - 50 rpm **Breaker plate**--- **Filter**---. **Thickness Die** - 0,2 mm, **Pre-heating** - 2 h @ 100°C.

PACKAGING

Pearlbond™ 12F75UV is packaged in heat-sealed, moisture proof PE bags of 25 Kg net weight. Bags are shipped on pallets of 750 Kg. additionally; PE-lined cardboard gay lords of 700 Kg net weight are available.

HEALTH AND SAFETY

A safety data sheet on **Pearlbond™ 12F75UV** is available, with all the information related to safety.

For further information refer to Lubrizol Advanced Materials processing guides.

STORAGE

Pearlbond™ 12F75UV 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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