

Technical Data Sheet

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.

SPECIFICATION

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

CHARACTERISTICS

Property	Test Method	Typical Values*
Density @ 20°C	ISO 2781 (ASTM D-792)	1.15 g/cm ³
Shore Hardness	ISO 868 (ASTM D-2240)	78 A
Softening range	MQSA 70A	110–130°C
Melting range	MQSA 70A	130–140°C
Tensile Strength	ISO 527 (ASTM D-412)	30 MPa (4351 psi)
Elongation @ Break	ISO 527 (ASTM D-412)	525%
Modulus @ 100% Elongation	ISO 527 (ASTM D-412)	4 MPa (580 psi)
Modulus @ 300% Elongation	ISO 527 (ASTM D-412)	7 MPa (1015 psi)
Density @ 20°C	ISO 2781 (ASTM D-792)	1.15 g/cm ³

*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.

WORKING INSTRUCTIONS

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.

EXTRUSION

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

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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	145°C (293°F)	155°C (311°F)
Zone 2	155°C (311°F)	165°C (329°F)
Zone 3	165°C (329°F)	170°C (338°F)
Zone 4	170°C (338°F)	180°C (356°F)
Die	170°C (338°F)	180°C (356°C)

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.

HEALTH AND SAFETY

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

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.

STORAGE

Material received from Lubrizol should be inspected to assure containers are not damaged during transportation before being stored prior to use. **Pearlbond™ 12F75UV** should be kept in a cool (15–25°C) and dry 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.

European version – Issue Date: 09/2015

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