

PEARLCOAT® 125K

Thermoplastic Polyurethane Elastomer

PEARLCOAT® 125K is a polyester based TPU, supplied in form of translucent, colourless pellets, featuring medium softening point, and consistent quality pellets, low gel content as well low-temperature flexibility.

TYPICAL PHYSICAL PROPERTIES

Physical Property	Test Method	Typical Values *
Density @ 20°C	DIN 53.479	1.20 g/cm ³
Shore Hardness	DIN 53.505	85 A
Tensile Strength	DIN 53.504	30 MPa
Modulus @ 100% Elongation	DIN 53.504	6 MPa
Modulus @ 300% Elongation	DIN 53.504	9 MPa
Elongation @ Break	DIN 53.504	500 %
Abrasion Loss	DIN 53.516	25 mm ³
Melting Range (MFI=10)	MQSA 111	135 – 145 °C
Softening Range (film 300µm)	MQSA 70 (Köfler)	125-135 °C
Tg. (DSC, 10°C / min.)	DIN 51.007	-27 °C

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

** Temperature at which MFI = 10 g/10 min @ 21.6 kg.

APPLICATIONS

PEARLCOAT® 125K is used in a wide range of applications:

- Melt coatings on textile substrates, for conveyor belts, belting, etc, end uses, obtained by extrusion, calendering or sintering (in this last case the product is previously ground, so as to be in powder form).
- Extruded films and fabric coatings.
- Low melting point carrier for TPU colour and additives masterbatches

WORKING INSTRUCTIONS

In accordance with our experience, the characteristics of the extruder which are suitable for processing PEARLCOAT® 125K 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).



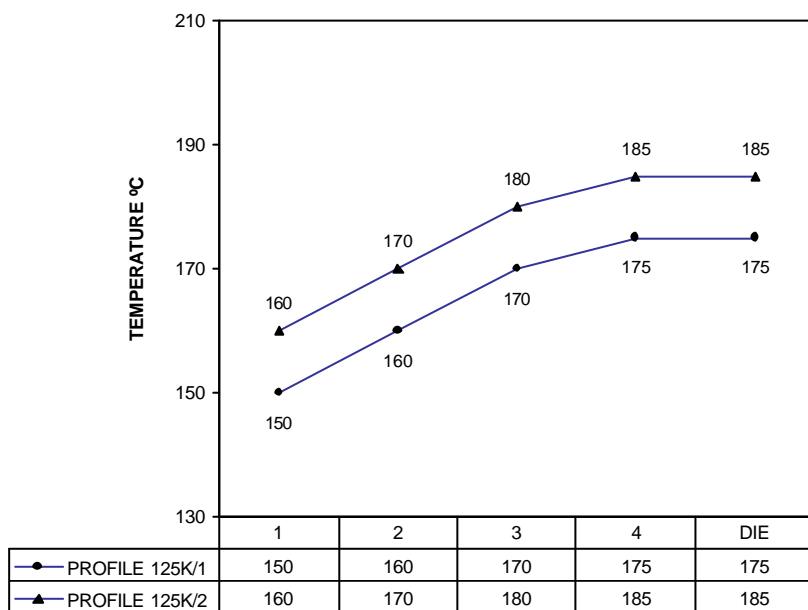
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3. The extruder screw should have a continuous regulation device and a working power higher than for processing other plastics.
4. The speed of the extruder should be low (12 to 60 rpm, depending on its diameter), so as to avoid material degradation 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 nr. of meshes /cm² will depend on the end product which is processed), so as to create a pressure built-up.

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

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



EXTRUDER & CONDITIONS
 TYPE.- 30/25D (L/D=25:1), COOLING.- Air, SCREW.- 3:1, SPEED.- 50 rpm
 BREAKER PLATE.- -. FILTER PACK.- -. THICKNESS DIE.- 0.2 mm. PRE-DRYING.- 1h @105 °C

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Merquinsa's Products are sold subject to Merquinsa's General Sales Conditions printed on the back of invoices and other shipping documents (available upon request). This is correct information based on our experience, and is given in good faith and without compromise. Each purchaser bears full responsibility for the application, use and processing of Merquinsa's products described herein, as well as their suitability to the purchaser's specific application, as this is beyond Merquinsa's control.

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Responsible Care®

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Thermoplastic Polyurethane Elastomer

CHARACTERISTICS OF THE FILM

Appearance	: Colourless, elastic, translucent
Softening point	: 125-135 °C <i>MQSA 70 B (Kofler)</i> .
Dry cleaning resistance	: Excellent

HEALTH AND SAFETY

A safety data sheet on **PEARLCOAT® 125K** is available, with all information related to safety.

The ingredients of **PEARLCOAT® 125K** comply with F.D.A. regulations, as described under 21 CFR, §177.2600 "Rubber Articles intended for Repeated Use" when **PEARLCOAT® 125K** is used in coatings and adhesives which are in contact with food.

PACKAGING

PEARLCOAT® 125K is packaged in heat-sealed, moisture proof multi-layer bags of 25 Kg net weight made of PE/Aluminium/PE. Bags are shipped on pallets of 750 Kg. Additionally; PE-lined cardboard gaylords of 700 Kg net weight are available.

STORAGE

Material received from Merquinsa should be inspected to assure containers are not damaged during transportation before being stored prior to use. **PEARLCOAT® 125K** 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.

For more information, please feel free to contact us at www.merquinsa.com