

# PEARLCOAT® 126K

Thermoplastic Polyurethane Elastomer

PEARLCOAT® 126K is a polyester-based TPU, supplied in form of translucent, colorless pellets, combining hardness with excellent low temperature flexibility and medium softening point.

| Physical Property            | Test Method      | Typical Values *   |
|------------------------------|------------------|--------------------|
| Specific Gravity             | ASTM D-792       | 1.20               |
| Shore Hardness               | ASTM D-2240      | 94 A               |
| Tensile Strength             | ASTM D-412       | 5076 psi.          |
| Modulus @ 100% Elongation    | ASTM D-412       | 1889 psi.          |
| Modulus @ 300% Elongation    | ASTM D-412       | 3632 psi.          |
| Elongation @ Break           | ASTM D-412       | 420 %              |
| Abrasion Loss                | DIN 53.516       | 40 mm <sup>3</sup> |
| Melting Range (MFI=10)**     | MQSA 111         | 310–330 °F         |
| Softening Range (film 300µm) | MQSA 70 (Köfler) | 300-320 °F         |
| Tg (DSC, 50°F / min.)        | DIN 51.007       | - 8 °F             |

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

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

## APPLICATIONS

PEARLCOAT® 126K is used in melt coatings on textile substrates, for conveyor belts, belting, among other end uses, obtained by extrusion, calendaring or sintering (in this last case the product is previously ground, so as to be in powder form).

PEARLCOAT® 126K is used for obtaining extruded films and fabric coatings.

## WORKING INSTRUCTIONS

In accordance with our experience, the characteristics of the extruders that are suitable for processing PEARLCOAT® 126K 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 between 2:1 and 3:1. (Usually, the screws that are used for Polyethylene extrusion give good results).

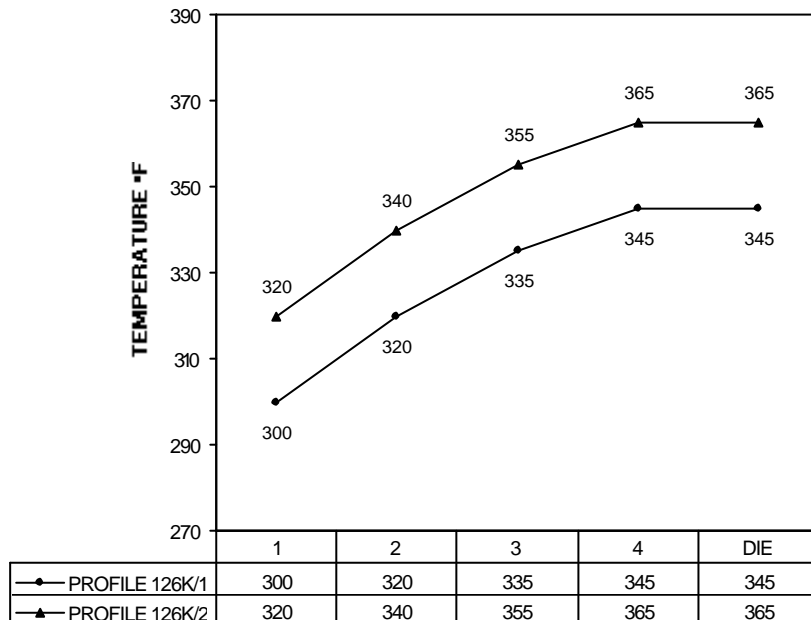
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- The extruder screw should have a continuous regulation device and a working power higher than for processing other plastics.
- The speed of the extruder should be low (12 to 60 rpm, depending on its diameter), so as to avoid material degradation due to shearing.
- The filters used should be disks with holes of  $\frac{1}{16}$  to  $\frac{3}{16}$  in. (depending on the screw and the die), and screen packs (the nr. of meshes /in<sup>2</sup> will depend on the end product that is processed), so as to create a pressure built-up.

For optimum results, previous drying of the product during 2 hours at 210 - 220° F 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 @220 °F

### CHARACTERISTICS OF THE FILM

|                         |                                       |
|-------------------------|---------------------------------------|
| Appearance              | : Colorless, elastic, translucent     |
| Softening point         | : 300-320°F <i>MQSA 70 B (Kofler)</i> |
| Dry cleaning resistance | : Excellent                           |

### HEALTH AND SAFETY

A safety data sheet on **PEARLCOAT® 126K** is available, with all information related to safety.

The ingredients of **PEARLCOAT® 126K** comply with F.D.A. regulations, as described under 21 CFR, §177.2600 "Rubber Articles intended for Repeated Use" when **PEARLCOAT® 126K** is used in coatings and adhesives which are in contact with food.

### PACKAGING

**PEARLCOAT® 126K** 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® 126K** should be kept in a cool (60-75°F) 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](http://www.merquinsa.com)