

**PEARLCOAT® DIPP-119**  
Thermoplastic Polyurethane Elastomer

PROVISIONAL TECHNICAL DATA SHEET

**PEARLCOAT® DIPP-119** is polycaprolactone copolyester based thermoplastic polyurethane, supplied in form of translucent pellets. Featuring low melting point and excellent transparency, this product offers excellent flexibility, elasticity and easy processing. Ideally used for extrusion or compounding with PVC.

**TYPICAL PHYSICAL PROPERTIES**

Physical Property	Test Method	Typical Values *
Density @ 20°C	DIN 53.479	1.16 g/cm <sup>3</sup>
Shore Hardness	DIN 53.505	70 A
Tensile Strength	DIN 53.504	20 MPa
Modulus @ 100% Elongation	DIN 53.504	2.5 MPa
Modulus @ 300% Elongation	DIN 53.504	4 MPa
Elongation @ Break	DIN 53.504	750 %
Tear strength	DIN 53.515	50 kN/m
Abrasion Loss	DIN 53.516	45 mm <sup>3</sup>
Melting Range (MFI=10)	MQSA 111	118-128 °C
Softening Range (film 300µm)	MQSA 70 (Köfler)	100-110 °C
Tg. (DSC, 10°C / min.)	DIN 51.007	- 30 °C

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

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

**SOLUBILITY**

**PEARLCOAT® DIPP-119** is soluble in MEK, DMF and THF. Diluents such as cyclohexanone and toluene can be added.

**APPLICATIONS**

**PEARLCOAT® DIPP-119** is used mostly in extrusion applications where low melting point as well as improved adhesion over polar substrates is highly appreciated. It is ideal for PVC compounding. It is also used in solvent coatings on textile substrates.

**WORKING INSTRUCTIONS**

For optimum results, previous drying of the product during 23 hours at 70-80 °C is advisable, in a hot air circulatory, vacuum or desiccant-air dryer.



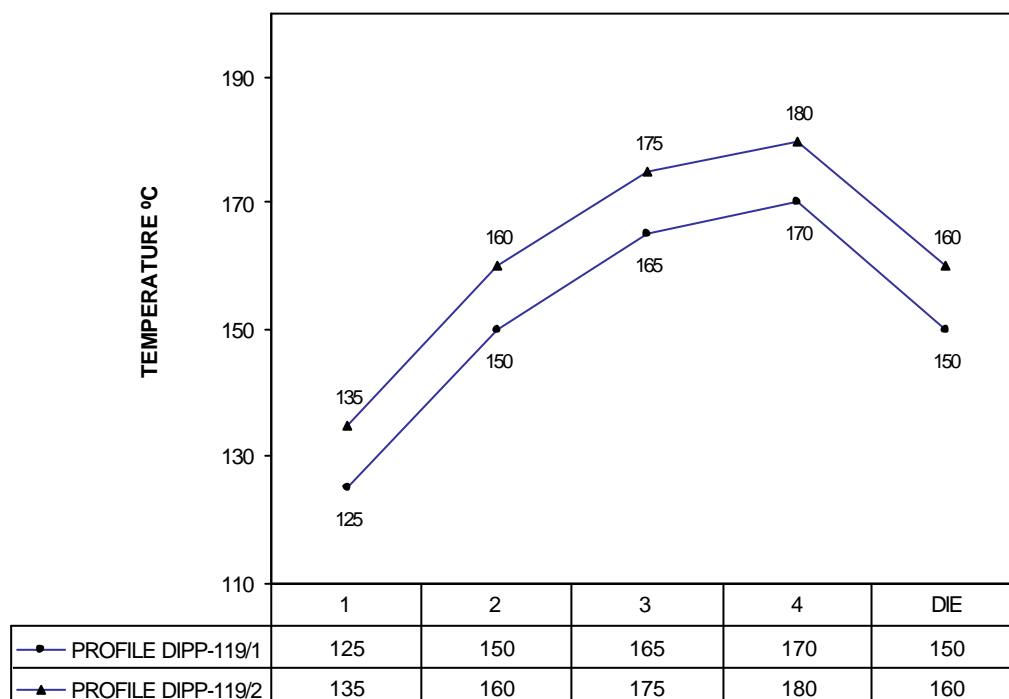
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In accordance with our experience, the characteristics of the extruder that are suitable for processing **PEARLCOAT® DIPP-119** are the following:

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 nr. of meshes /cm<sup>2</sup> will depend on the end product which is processed), so as to create a pressure built-up.



### 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.- 2h @80 °C

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**HEALTH AND SAFETY**

A safety data sheet on **PEARLCOAT® DIPP-119** is available, with all information related to safety. When solutions are being prepared, the usual cares in the handling of solvents must be taken, i.e. good ventilation in the working area, good skin protective measures and use of goggles.

**PACKAGING**

**PEARLCOAT® DIPP-119** 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® DIPP-119** 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](http://www.merquinsa.com)