

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	ASTM D-792	1.16
Shore Hardness	ASTM D-2240	70 A
Tensile Strength	ASTM D-412	2906 psi
Modulus @ 100% Elongation	ASTM D-412	363 psi
Modulus @ 300% Elongation	ASTM D-412	581 psi
Elongation @ Break	ASTM D-412	750 %
Tear strength	ASTM D-624 (Die C)	286 lb/in
Abrasion Loss	DIN 53.516	45 mm ³
Melting Range (MFI=10)	MQSA 111	244-262 °F
Softening Range (film 300µm)	MQSA 70 (Köfler)	212-230 °F
Tg. (DSC, 10°C / min.)	DIN 51.007	- 22 °F

* 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 2-3 hours at 160-175° F is advisable, in a hot air circulatory, vacuum or desiccant-air dryer.

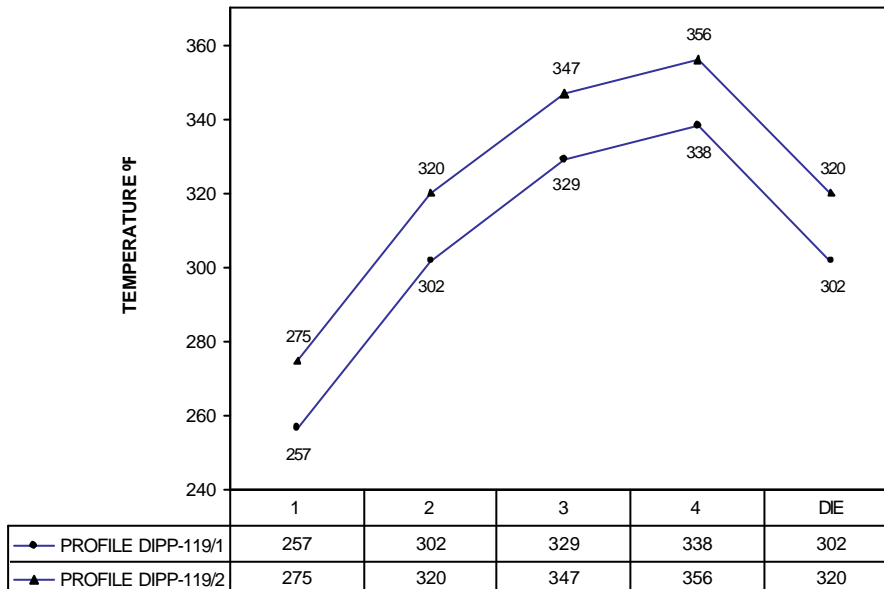
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In accordance with our experience, the characteristics of the extruders that are suitable for processing **PEARLCOAT® DIPP-119** are the following:

1. L/D ratio between 25:1 and 30:1
2. The extruder screw must have 3 zones and a compression ratio 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 $\frac{1}{16}$ to $\frac{3}{16}$ in. (depending on the screw and the die), and screen packs (the nr. of meshes /in² 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 @175 °F

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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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 (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