

## Dow Pellethane® 2102-90AE Polyurethane Elastomer, Polyester Polycaprolactone Based (discontinued \*\*)

Category : Polymer , Thermoplastic , Elastomer, TPE , Polyurethane, TP , Thermoplastic Polyurethane, Elastomer, Polyester Grade

### Material Notes:

PELLETHANE® 2102-90AE elastomer is a polyester polycaprolactone based polyurethane elastomer which combines excellent resistance to fuels and oils with good damping capacity and good hydrolytic stability compared to other polyester based TPUs. Its typical applications seals, gaskets, belting, hose jacketing, tubing, animal ID tags and other fabricated products. Data provided by Dow Chemical. Lubrizol acquired the Pellethane product line from Dow in 2009.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Dow-Pellethane-2102-90AE-Polyurethane-Elastomer-Polyester-Polycaprolactone-Based-nbspdiscontinued-.php](http://www.lookpolymers.com/polymer_Dow-Pellethane-2102-90AE-Polyurethane-Elastomer-Polyester-Polycaprolactone-Based-nbspdiscontinued-.php)

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in <sup>3</sup>	
Linear Mold Shrinkage	0.0050 - 0.0070 cm/cm @Thickness 1.59 mm	0.0050 - 0.0070 in/in @Thickness 0.0625 in	plaque
Linear Mold Shrinkage, Transverse	0.0060 - 0.0070 cm/cm @Thickness 1.59 mm	0.0060 - 0.0070 in/in @Thickness 0.0625 in	plaque
Melt Flow	29 g/10 min @Load 1.20 kg, Temperature 224 °C	29 g/10 min @Load 2.65 lb, Temperature 435 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	90 - 98	90 - 98	ASTM D2240
Hardness, Shore D	54 - 62	54 - 62	ASTM D2240
Tensile Strength at Break	42.0 MPa	6090 psi	Tensile stress at break.
Elongation at Break	540 %	540 %	
50% Modulus	0.00841 GPa	1.22 ksi	
100% Modulus	0.0103 GPa	1.49 ksi	
300% Modulus	0.0207 GPa	3.00 ksi	
Flexural Modulus	0.0758 GPa	11.0 ksi	
Tear Strength	131 kN/m	747 pli	
Taber Abrasion, mg/1000 Cycles	10	10	H22 Wheel

Compression Set Mechanical Properties	30 % Metric	30 % English	23°C Comments
	40 %	40 %	
	@Temperature 70.0 °C	@Temperature 158 °F	
Tensile Set	60 %	60 %	Elongation set after break

Thermal Properties	Metric	English	Comments
CTE, linear	151 µm/m-°C	83.9 µin/in-°F	
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Vicat Softening Point	89.0 °C	192 °F	
Glass Transition Temp, Tg	-24.0 °C	-11.2 °F	
Clash Berg Stiffness Temperature	-39.0 °C	-38.2 °F	

Processing Properties	Metric	English	Comments
Processing Temperature	193 - 210 °C	379 - 410 °F	Optimum Extrusion Temperature
Melt Temperature	213 - 216 °C	415 - 421 °F	

## Contact Songhan Plastic Technology Co.,Ltd.

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