



LARIPUR[®] Thermoplastic Polyurethane

SEALS & GASKETS

Physical Properties	Test Method	Unit	LPR 2102-85AE	LPR 2103-90AE	LPR 2203-93A	LPR 2202-95A	LPR 107-93A	
Chemical nature			Polycaprolactone	Polyether	Polyether	Polycaprolactone	Polycaprolactone	
Specific Gravity	DIN 53479	gr/cm ³	1,16	1,14	1,14	1,21	1,19	
Shore Hardness	DIN 53505	A/D	84 A	90 A	92 A	93 A	93 A	
Abrasion Loss	DIN 53516	mm ³	30	35	30	35	35	
Tensile Modulus:	DIN 53504	50%	N/mm ²	4,5	8,3	9,0	10,8	9,2
		100%	N/mm ²	6,5	10,4	11,2	14,0	11,5
		300%	N/mm ²	16,0	21,2	21,4	33,0	24,2
Tensile Strength	DIN 53504	N/mm ²	53,2	52,0	51,1	59,2	54,5	
Elongation at Break	DIN 53504	%	520	550	460	450	520	
Tear Strength	DIN 53515	N/mm	70	85	80	100	100	
Vicat Softening Point	ISO 306	°C	89	98	145	154	175	
Flexural Modulus	ISO 178	N/mm ²			45	62	65	
Compression Set:	DIN 53517	70h/23°C	%	17	22	16	17	17
		22h70°C	%	36	48	28	27	18
		70h/100°C	%					38

Both polycaprolactone-ester and ether based Laripur[®] TPU exhibit very low compression set values, even at high temperatures, and low temperature flexibility as well, combined with hydrolysis resistance and good resistance to oils and chemicals.

Most of these grades have been purposely developed for manufacturing hydraulic seals and pneumatic gaskets or any other application where compression set, resistance to oil and/or high temperature performance is required.

Typical Value*

- This technical note has been written on the base of our present best knowledge, but the above mentioned data have not to be released as a specification for the materials in object.
- Properties reported in this bulletin are determined on annealed specimens obtained by injected test plaques and mostly represent an average of values gathered from a significative number of production lots.
- Even if we guarantee the quality consistency of the Laripur products, we could periodically issue up-dated version of this Technical Bulletin and modify the respective sales specification as well.
- The international standards here indicated have to be intended as a reference to carry out the various tests but the choice of available options and any possible variation are mentioned in our respective internal standards.

LARIPUR[®] TPU

FEATURES:	Good Compression Set	Good Comp. Set and excellent hydrolysis resistance	Excellent Low Comp. Set, even at high temperature, low temperature flexibility and excellent hydrolysis resistance	Excellent Low Compression Set even at high temperature	Very low Compression Set even at high temperature and Low temperature flexibility
EEC food contact approved	EEC	EEC			
FDA food contact approved	FDA	FDA			

The information presented herein are given in good faith but without warranty. They are based on our experience, indicate our laboratory work results and do not necessary indicate final product performance. We cannot be held liable for the results obtained with our products and for any loss or accident that may result from its use. Our suggestions do not release you from the obligation to check its validity and to test our products for both their process and end use application. COIM assumes no obligation or liability for the description, data and information given or result obtained as production testing and end product performance are the responsibility of the user. All our products are sold in accordance with our General Conditions of Sale. We don't make any warranties, express or implied, including, but not limited to the merchantability and fitness for a particular purpose.





LARIPUR[®] TPU

Thermoplastic Polyurethane

Polyester, Polycaprolactone and Polyether based products with hardness ranges from 60 Shore A up to 75 Shore D:

- Toughness and Durability - Excellent Abrasion Resistance
- Excellent Low Temperature Flexibility • Resistance to Fuel, Oils, Grease and Fats
- Outstanding Compression Set Properties • Hydrolysis and Microbial Resistance.

Series 15 and 18 Plasticized Ester

Developed to provide soft touch and flexibility and fast cycle time for injection moulding while maintaining good abrasion resistance and physical properties. Products also available without phthalate based plasticizers.

Series 20 Standard Ester

Injection Molding grades providing strong resilience and tear resistance, excellent abrasion resistance and good stability in water, solvents and against light and oxidation.

Series 25 Special Ester

Designed for both injection molding and extrusion of hose, tubes, profiles, belts, films and sheets. Higher resistance to hydrolysis and improved flexibility at low temperatures.

Series 2102 Polycaprolactone Ester

Polycaprolactone based TPU. Improved elasticity and hydrolysis resistance compared to Special Esters.

Series 50 Modified Ester

Polyester based TPU coupling high hardness with improved low temperature impact resistance.

Series 60 and 2103 Ether

High quality polyether based TPU. Improved resistance to hydrolysis and microbial attack with low temperature flexibility and high impact properties.

Seal Grades

Both polyether and Polycaprolactone based TPUs exhibiting very low compression set values at high temperatures combined with good resistance to oils and chemicals.

Special Grades

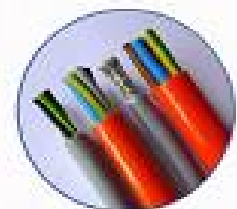
Specially developed TPUs to cover a variety of market and customer needs in specific application.

LARICOL Thermoplastic Adhesives

A range of Crystalline Thermoplastic Polyurethane Adhesives supplied in pellet form.

Laricol products are designed to provide excellent bond to various substrates including plastics (TPU, PU, EVA, PVC,...), rubber, leather, textiles, wood, etc..

They can be used for solvent solution thermo-reactive adhesives, powder sintering and thermo-adhesive extruded film.



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