

## Technical Data

### Product Description

LARIPUR®  
LPR8025

SERIES 25 SPECIAL ESTER

Products based on special grade saturated polyester. The features are similar to those of Series 20 but are characterised by a higher resistance to hydrolysis failure and improved flexibility at low temperatures.

Generic  
TPU-Polyester

This data represents typical values that have been calculated from all products classified as: Generic TPU-Polyester

This information is provided for comparative purposes only.

General	LARIPUR® LPR8025	Generic TPU-Polyester
Manufacturer / Supplier	<ul style="list-style-type: none"> <li>COIM S.p.A.</li> </ul>	<ul style="list-style-type: none"> <li>Generic</li> </ul>
Generic Symbol	<ul style="list-style-type: none"> <li>TPU-Polyester</li> </ul>	<ul style="list-style-type: none"> <li>TPU-Polyester</li> </ul>
Material Status	<ul style="list-style-type: none"> <li>Commercial: Active</li> </ul>	<ul style="list-style-type: none"> <li>Commercial: Active</li> </ul>
Literature <sup>1</sup>	<ul style="list-style-type: none"> <li><a href="#">Technical Datasheet (English)</a></li> </ul>	--
Search for UL Yellow Card	<ul style="list-style-type: none"> <li>COIM S.p.A.</li> <li>LARIPUR®</li> </ul>	--
Availability	<ul style="list-style-type: none"> <li>Africa &amp; Middle East</li> <li>Asia Pacific</li> <li>Europe</li> <li>Latin America</li> <li>North America</li> </ul>	<ul style="list-style-type: none"> <li>Africa &amp; Middle East</li> <li>Asia Pacific</li> <li>Europe</li> <li>Latin America</li> <li>North America</li> </ul>
Features	<ul style="list-style-type: none"> <li>Abrasion Resistant</li> <li>Good Compression Set</li> <li>Good Flexibility</li> <li>Good Tear Strength</li> <li>Hydrolysis Resistant</li> <li>Low Temperature Flexibility</li> <li>Oil Resistant</li> <li>Oxidation Resistant</li> <li>Resilient</li> <li>Solvent Resistant</li> </ul>	--
Processing Method	<ul style="list-style-type: none"> <li>Extrusion</li> <li>Injection Molding</li> </ul>	--

Physical	LARIPUR® LPR8025	Generic TPU-Polyester	Unit	Test Method
Density / Specific Gravity				
--	1.18	--		DIN 53479
--	--	1.17 to 1.24		ASTM D792
--	--	1.18 to 1.25	g/cm <sup>3</sup>	ISO 1183
--	--	0.0439	lb/in <sup>3</sup>	ISO 1183 <sup>3</sup>
--	--	0.337 to 1.19	g/cm <sup>3</sup>	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/8.7 kg)	--	12 to 30	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (190°C/21.6 kg)	--	34 to 77	cm <sup>3</sup> /10min	ISO 1133
Molding Shrinkage				
Flow	--	3.9E-3 to 9.1E-3	in/in	ASTM D955
Across Flow	--	7.9E-3 to 8.2E-3	in/in	ASTM D955
--	--	0.76 to 0.82	%	ISO 294-4



Mechanical	LARIPUR® LPR8025	Generic TPU-Polyester	Unit	Test Method
Tensile Modulus				
--	--	800 to 7400	psi	ASTM D638
--	--	20300 to 106000	psi	ISO 527-1
Tensile Stress				ISO 527-2
Break	--	3990 to 8800	psi	
--	--	72.5 to 4450	psi	
Tensile Strain (Break)	--	400 to 750	%	ISO 527-2
Flexural Modulus				
--	--	1300 to 22300	psi	ASTM D790
--	--	1350 to 32900	psi	ISO 178
Taber Abrasion Resistance	--	8.30 to 70.7	mg	ASTM D1044
Abrasion Loss	30.0	--	mm <sup>3</sup>	DIN 53516
Tear Resistance	11893	--	psi	DIN 53515
Elastomers	LARIPUR® LPR8025	Generic TPU-Polyester	Unit	Test Method
Tensile Stress				
20% Strain	--	72.5 to 870	psi	ISO 37
50% Strain	624	--	psi	DIN 53504
50% Strain	--	145 to 2520	psi	ASTM D412
100% Strain	812	--	psi	DIN 53504
100% Strain	--	223 to 2180	psi	ASTM D412
100% Strain	--	145 to 2680	psi	ISO 37
300% Strain	1990	--	psi	DIN 53504
300% Strain	--	290 to 3940	psi	ASTM D412
300% Strain	--	290 to 5220	psi	ISO 37
Tensile Strength				
Yield	--	2800 to 6820	psi	ASTM D412
Yield	--	3580 to 8030	psi	ISO 37
Break	7720	--	psi	DIN 53504
Break	--	305 to 8820	psi	ASTM D412
Break	--	2760 to 7980	psi	ISO 37
--	--	2500 to 7430	psi	ASTM D412
Tensile Elongation				
Break	620	--	%	DIN 53504
Break	--	270 to 820	%	ASTM D412
Break	--	330 to 920	%	ISO 37
Tear Strength				
--	--	0.428 to 1200	lbf/in	ASTM D624
Split	--	100 to 290	lbf/in	ASTM D470
--	--	186 to 1040	lbf/in	ISO 34-1
Compression Set				
--	--	14 to 56	%	ASTM D395
--	--	14 to 52	%	ISO 815
Bayshore Resilience	--	25 to 51	%	ASTM D2632



Impact	LARIPUR® LPR8025	Generic TPU-Polyester	Unit	Test Method
Charpy Notched Impact Strength	--	1.9 to 95	ft·lb/in <sup>2</sup>	ISO 179
Hardness	LARIPUR® LPR8025	Generic TPU-Polyester	Unit	Test Method
Durometer Hardness				
--	--	54 to 98		ASTM D2240
Shore A	82	--		DIN 53505
--	--	36 to 98		ISO 868
Shore A, 3 sec	--	86 to 98		ISO 868 <sup>3</sup>
Shore D, 15 sec	--	38 to 60		ISO 868 <sup>3</sup>
Thermal	LARIPUR® LPR8025	Generic TPU-Polyester	Unit	Test Method
Brittleness Temperature	--	-90.4 to 7.52	°F	ASTM D746
Glass Transition Temperature				
--	--	-55.8 to 19.0	°F	ASTM E1356
--	--	-50.8 to 17.5	°F	DSC
Vicat Softening Temperature				
--	--	146 to 316	°F	ASTM D1525
--	--	152 to 319	°F	ISO 306
Melting Temperature				
--	--	154 to 339	°F	
--	--	230 to 430	°F	DSC
CLTE - Flow	--	5.5E-5 to 9.5E-5	in/in/°F	ASTM D696
Aging	LARIPUR® LPR8025	Generic TPU-Polyester	Unit	Test Method
Change in Tensile Strength in Air	--	-3.2 to 21	%	ASTM D573 ISO 188
Change in Ultimate Elongation in Air	--	-0.25 to 52	%	ASTM D573 ISO 188
Change in Durometer Hardness in Air	--	-5.1 to 0.13		ASTM D573 ISO 188
Change in Tensile Strength	--	-28 to 20	%	ASTM D471 ISO 1817
Change in Ultimate Elongation	--	-8.5 to 31	%	ASTM D471 ISO 1817
Change in Durometer Hardness	--	-11 to 2.2		ASTM D471 ISO 1817
Change in Volume	--	-1.0 to 2.1	%	ASTM D471 ISO 1817
Thermoset	LARIPUR® LPR8025	Generic TPU-Polyester	Unit	
Demold Time	--	6.0 to 6.1	min	
Injection	LARIPUR® LPR8025	Generic TPU-Polyester	Unit	
Drying Temperature	--	174 to 224	°F	
Drying Time	--	2.0 to 4.3	hr	
Dew Point	--	-23 to -22	°F	
Suggested Max Moisture	--	0.020 to 0.030	%	
Hopper Temperature	--	85 to 105	°F	



Injection	LARIPUR® LPR8025	Generic TPU-Polyester	Unit
Rear Temperature	--	338 to 413	°F
Middle Temperature	--	344 to 420	°F
Front Temperature	--	345 to 420	°F
Nozzle Temperature	--	355 to 429	°F
Processing (Melt) Temp	--	359 to 446	°F
Mold Temperature	--	73 to 124	°F
Injection Pressure	--	870 to 12700	psi
Holding Pressure	--	435 to 613	psi
Back Pressure	--	23.9 to 1450	psi
Screw Speed	--	49 to 130	rpm
Clamp Tonnage	--	4.0	tons/in <sup>2</sup>

**Injection Notes**

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Extrusion	LARIPUR® LPR8025	Generic TPU-Polyester	Unit
Drying Temperature	--	175 to 225	°F
Drying Time	--	2.5 to 4.1	hr
Suggested Max Moisture	--	0.020 to 0.031	%
Hopper Temperature	--	91 to 97	°F
Cylinder Zone 1 Temp.	--	324 to 404	°F
Cylinder Zone 2 Temp.	--	337 to 404	°F
Cylinder Zone 3 Temp.	--	336 to 410	°F
Cylinder Zone 4 Temp.	--	335 to 413	°F
Cylinder Zone 5 Temp.	--	337 to 412	°F
Adapter Temperature	--	353 to 411	°F
Melt Temperature	--	374 to 402	°F
Die Temperature	--	368 to 429	°F

**Extrusion Notes**

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**Notes**

<sup>1</sup> These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

<sup>2</sup> Typical properties: these are not to be construed as specifications.

<sup>3</sup> Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.

