

**Technical Data Sheet**
**Type:** Estane<sup>®</sup> 2103-80AEN is a thermoplastic polyurethane elastomer.

**Feature:** NSF Standard 61 certified, FDA compliance.

Properties	Test Method	English		S.I.	
		Values <sup>†</sup>	Units	Values <sup>†</sup>	Units
<b>Physical<sup>(1)</sup></b>					
Shore Hardness	ASTM D 2240	83	A	83	A
Specific Gravity	ASTM D 792	1.13		1.13	
Melt Flow Rate, 190°C/8.7kg	ASTM D 1238	-	g/10min	20	g/10min
Taber Abrasion Resistance, 1000g, 1000 cycles; H-22 wheel (coarser)	ASTM D 1044	-	mg	20	mg
Mold Shrinkage, Transverse direction	ASTM D 955	0-0.6	%	0-0.6	%
Mold Shrinkage, Flow direction	ASTM D 955	0.5-0.7	%	0.5-0.7	%
<b>Mechanical<sup>(2)</sup></b>					
Tensile Modulus	ASTM D 412	550	psi	3.8	MPa
-50% elongation		870	psi	6.0	MPa
-100% elongation		1600	psi	11.0	Mpa
-300% elongation					
Ultimate Elongation	ASTM D 412	650	730	650	%
Ultimate Tensile Strength	ASTM D 412	4200	psi	28.9	Mpa
Elongation Set After Break	ASTM D 412	40	%	40	%
Tear Strength, Die C	ASTM D 624	500	66.5	87.6	KN/m
Compression Set, Method B	ASTM D 395				
-22 hrs @ 25°C		30	%	30	%
-22 hrs @ 70°C		75	%	75	%
<b>Thermal</b>					
Vicat Softening Point (120°C/hr, 9.8N)	ASTM D 1525	162	°F	72.2	°C
Glass Transition Temperature	DSC	-49	°F	-45	°C
CLTE, in-flow	ASTM D 696	95	in/in/°F	171	mm/mm/°C
<b>Processing Conditions (Typical)</b>					
Drying Temperature (air dew point <-40C)		180-200	°F	82-93	°C
Melt Temperature (Molding)		370-400	°F	188-204	°C
Melt Temperature (Extrusion)		360-390	°F	182-199	°C
Mold Temperature		60-140	°F	16-60	°C

<sup>1</sup>Typical properties; not to be construed as sales specifications. Fabrication conditions, part design, additives, processing aids, finishing materials and use conditions can all affect the integrity, performance and regulatory status of finished goods.

<sup>2</sup>Tests conducted on 0.126 inch (3.2mm) injection molded specimen, unannealed, unless noted.

The information contained herein is believed to be reliable, but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained. The information often is based on laboratory work with small-scale equipment and does not necessarily indicate end product performance or reproducibility. Formulations presented may not have been tested for stability and should be used only as a suggested starting point. Because of the variations in methods, conditions and equipment used commercially in processing these materials, no warranties or guarantees are made as to the suitability of the products for the applications disclosed. Full-scale testing and end product performance are the responsibility of the user. Lubrizol Advanced Materials, Inc. shall not be liable for and the customer assumes all risk and liability for any use or handling of any material beyond Lubrizol Advanced Materials, Inc.'s direct control. The SELLER MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Nothing contained herein is to be considered as permission, recommendation nor as an inducement to practice any patented invention without permission of the patent owner.

