



MAKERS OF  ACUSHNET RUBBER  
O RINGS • CUSTOM ELASTOMER SOLUTIONS

## Technical Report: Low Temp Grades Comparison

	F78 (GFLT <sup>®</sup> Type)	F19 (GLT <sup>®</sup> Type)	<u>F103 (-40 TG)</u>
<b>Physical properties:</b>			
Hardness Shore A, pts	74	75	78
Tensile Strength, psi	2756	1639	2401
Elongation, %	267	233	134
TR10, °C	-24	-30	-40
<b>Fluid Resistance, ASTM D471, Fuel C, 168h @ 40°C:</b>			
Change in Durometer, pts	-5	-6	-5
Change in Tensile, %	-38	-37	-36
Change in Elongation, %	-17	-32	14
Volume Change, %	10	16	9
<b>Fluid Resistance, ASTM D471, CE-10, 168h @ 40°C:</b>			
Change in Durometer, pts	-9	-10	-8
Change in Tensile, %	-48	-50	-36
Change in Elongation, %	-30	-38	17
Volume Change, %	13	25	12
<b>Fluid Resistance, ASTM D471, CE-22, 168h @ 40°C:</b>			
Change in Durometer, pts	-10	-12	-9
Change in Tensile, %	-45	-59	-34
Change in Elongation, %	-31	-42	17
Volume Change, %	14	26	13
<b>Fluid Resistance, ASTM D471, CE-50, 168h @ 40°C:</b>			
Change in Durometer, pts	-7	-10	-9
Change in Tensile, %	-44	-58	-30
Change in Elongation, %	-31	-34	13
Volume Change, %	12	24	13
<b>Fluid Resistance, ASTM D471, CE-85, 168h @ 40°C:</b>			
Change in Durometer, pts	-6	-8	-8
Change in Tensile, %	-37	-51	-27
Change in Elongation, %	-20	-33	16
Volume Change, %	10	16	7
<b>Fluid Resistance, ASTM D471, Ethanol, 168h @ 40°C:</b>			
Change in Durometer, pts	-5	-7	-6
Change in Tensile, %	-31	-35	-25
Change in Elongation, %	-12	-24	20
Volume Change, %	5	10	4

MAKERS OF

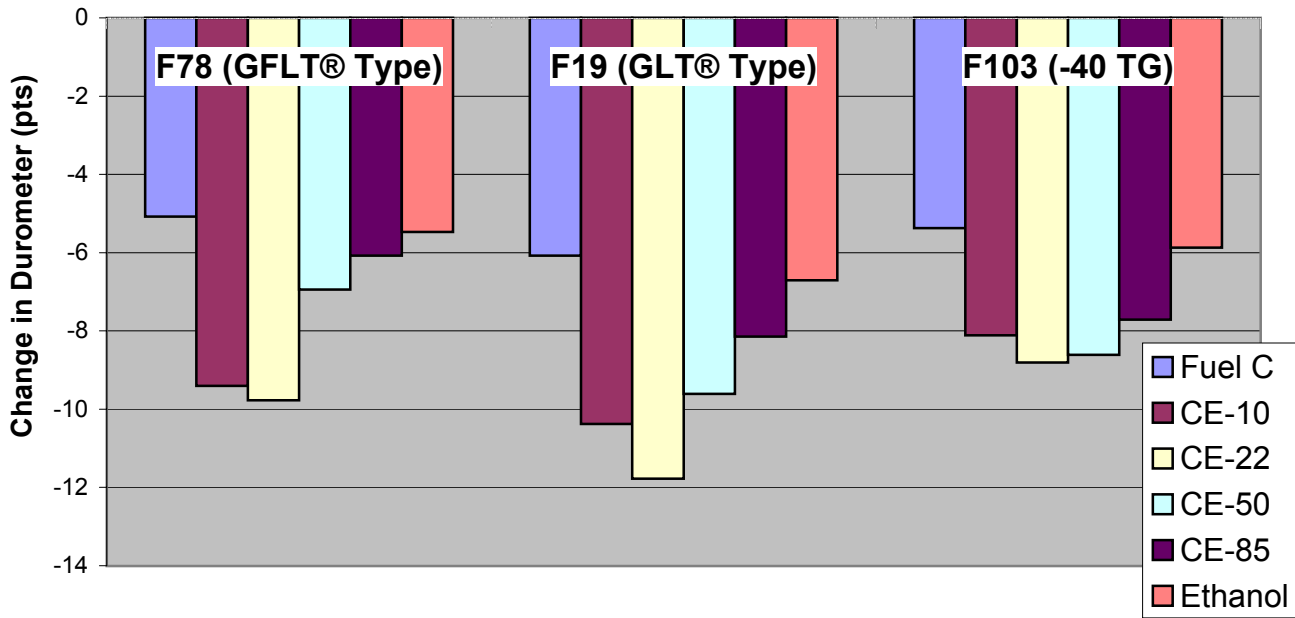
  
**ACUSHNET RUBBER**  
O RINGS  
CUSTOM ELASTOMER SOLUTIONS

**Worldwide Headquarters:** 744 Belleville Ave., New Bedford, MA 02745 USA  
800.225.8505, 508.998.4000 / 508.998.4100 fax / success@precixinc.com

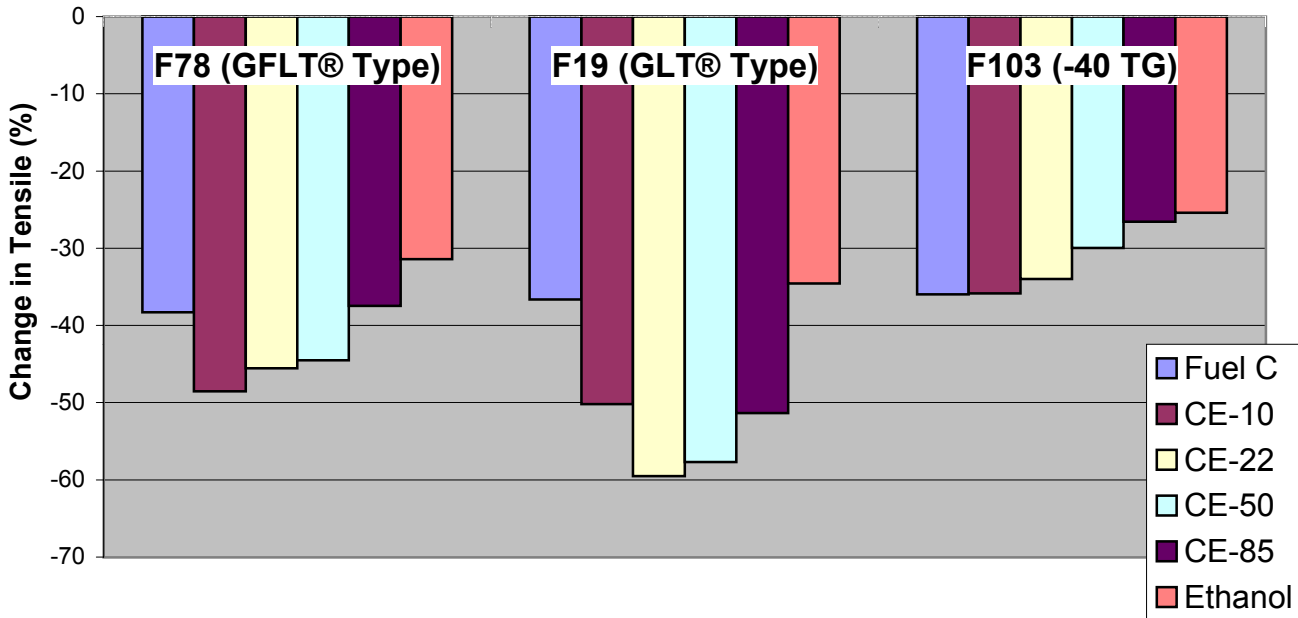
**Precix<sup>®</sup> Europe:** BWD Automotive GmbH, Regerstrasse 4, 22761 Hamburg, Germany  
+49(0) 40 89 05 92 0 / +49(0) 40 89 05 92 33 fax / europe@precixinc.com



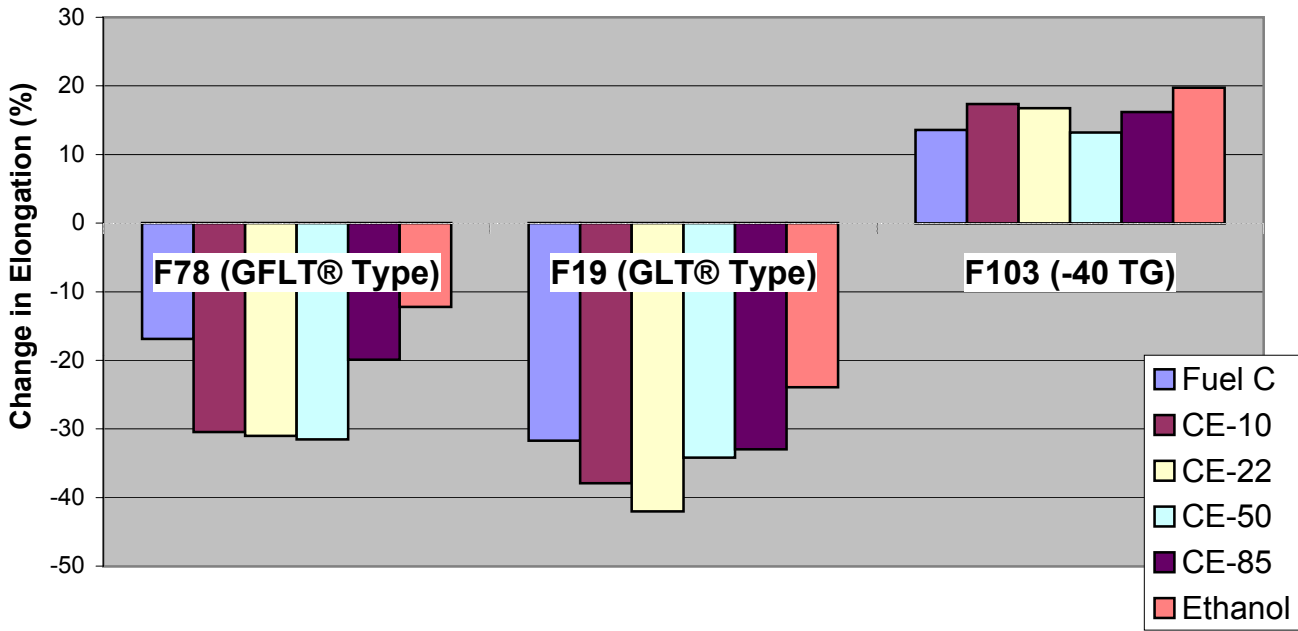
## Durometer Change vs. Ethanol Content 168h @ 40C



## Tensile Strength Change vs. Ethanol Content 168h @ 40C



## Change in Elongation vs. Ethanol Content 168h @ 40C



## Volume Change vs. Ethanol Content 168h @ 40C

