

## LABORATORY REPORT

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E-07-D

DATE : Feb/26/2019

**MATERIAL :** ETHYLENE PROPYLENE  
**COMPOUND :** E8083AA  
**SPEC. :** ASTM D2000 M8CA810 A25 B35 EA14 F17 G11 G21 Z1 Z2 Z3 Z4  
 Z1=Elongation min. 100%  
 Z2=WRAS approval  
 Z3=meet FDA  
 Z4=Service Temperature -55°C ~ +125°C  
**COLOR :** BLACK

	<u>Original Physical Properties</u>	<u>Requirements</u>	<u>Results</u>
	Hardness, (Shore A) (ASTM D2240-15 <sup>e1</sup> )	80±5	79
	Tensile Strength, psi(MPa) (ASTM D412-16)	1450(min)	2187(15.08)
<u>Z1</u>	Elongation, (%) (ASTM D412-16)	100(min)	152
	Modulus at 100%, psi(MPa) (ASTM D412-16)		1072(7.39)
<u>G11</u>	Tear resistance, (kN/m) (ASTM D624-00, <u>die B</u> )	26(min)	32.51
<u>G21</u>	Tear resistance, (kN/m) (ASTM D624-00, <u>die C</u> )	26(min)	27.62
	Density, (Mg/m <sup>3</sup> ) (CNS 5341-96, Method A)		1.18
<u>A25</u>	<u>Heat Age, 70 Hrs @ 125 °C (ASTM D865-11)</u>		
	Hardness Change, pts.	+10(max)	0
	Tensile Strength Change, %	-20(max)	-5
	Elongation Change, %	-40(max)	+4
	Weight Change, %		+0.7
<u>B35</u>	<u>Compression Set, 22 Hrs @ 125°C (ASTM D395-18, Method B)</u>	50%(plied)(max)	13.2
<u>EA14</u>	<u>Water Resistance, 70 Hrs @ 100 °C (ASTM D471-16a)</u>		
	Hardness Change, pts.		-2
	Tensile Strength Change, %		+6
	Elongation Change, %		+12
	Volume Change, %	±5	+1.1
<u>F17</u>	<u>Low-Temperature Brittleness Point Test, 3(minute) at -40°C (ASTM D2137-11, Method C)</u>		
	Sample type: T-50, Coolant : Isopropyl alcohol, Low Temperature Property	no crack	pass

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