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LABORATORY REPORT

MATERIAL： **BUTADIENE ACRYLONITRILE COPOLYMER** **E-07-D**
COMPOUND: **N8018AA** **Date:Aug/31/2021**
SPEC.: **ASTM D2000 M6BG810 A14 B14 EA14 EF11 EF21 EO14 EO34**
COLOR: **BLACK**

	Original Physical Properties	Requirements	Results
	Hardness,(shore A)(ASTM D2240-15$^{\varepsilon 1}$)	80±5	80
	Tensile Strength,psi(MPa)(ASTM D412-16)	1450(10)(min)	2830(19.52)
	Elongation,(%)(ASTM D412-16)	125(min)	161
	Modulus at 100%,psi(MPa)(ASTM D412-16)		1449(9.99)
	Density,(Mg/m^3)(CNS 5341-96,Method A)		1.27
A14	Heat age, 70 Hrs @ 100 ℃ (ASTM D573-04)		
	Hardness Change, pts.	±15	+3
	Tensile Strength Change, %	-20(max)	-6
	Elongation Change, %	-40(max)	-25
	Weight Change, %		+1.1
B14	Compression set, 22 Hrs @ 100 ℃ (ASTM D395-18,Method B)	25%(button)(max)	6.5
EA14	Water resistance, 70 Hrs @ 100 ℃ (ASTM D471-16a)		
	Hardness Change, pts.	±10	-3
	Tensile Strength Change, %		-5
	Elongation Change, %		-5
	Volume Change, %	±15	+4.1
EF11	ASTM Fuel A resistance, 70 Hrs @ 23 ℃ (ASTM D471-16a)		
	Hardness Change, pts.	±10	-2
	Tensile Strength Change, %	-25(max)	-6
	Elongation Change, %	-25(max)	-10
	Volume Change, %	-5~+10	+3.1
EF21	ASTM Fuel B resistance, 70 Hrs @ 23 ℃ (ASTM D471-16a)		
	Hardness Change, pts.	-30~0	-16
	Tensile Strength Change, %	-60(max)	-45
	Elongation Change, %	-60(max)	-35
	Volume Change, %	0~+40	+26.1
EO14	IRM 901 Oil, 70 Hrs @ 100 ℃ (ASTM D471-16a)		
	Hardness Change, pts.	-15~+5	-3
	Tensile Strength Change, %	-25(max)	-8
	Elongation Change, %	-45(max)	-12
	Volume Change, %	-10~+5	+3.5
EO34	IRM 903 Oil, 70 Hrs @ 100 ℃ (ASTM D471-16a)		
	Hardness Change, pts.	0 ~-20	-10
	Tensile Strength Change, %	-45(max)	-37
	Elongation Change, %	-45(max)	-31
	Volume Change, %	0~+35	+13.1

APPROVAL Dennis (Lab Manager)　**AUDIT Ru-Ling Liu** (Chemical Engineer)　**REPORT Reachel** (Laboratory Specialist)