



Compound

**5516****NITRILE BUTADIENE  
50 DUROMETER  
BLACK - LOW TEMP.****PRODUCT DATA SHEET**

Compound 5516 is a 50 durometer black colored general purpose Buna N elastomer, it is specifically formulated for its low temperature flexibility. It exhibits good resistance to heat and petroleum based oils.

This compound will meet or exceed the specifications listed and has the following physical properties:

ASTM D2000 2 BG 515 B14 EA14 EO14 F17  
3 BG 515 B14 EO34  
4 BG 515 A14 B14  
5 BG 515 A14 B14 EO14 EO34

**Original Properties**

Modulus @ 100% Elongation	113 psi	0.8 MPa
Tensile Strength	1972 psi	13.6 MPa
Ultimate Elongation	840 %	
Hardness, Shore A	53 Durometer	
Specific Gravity	1.12 grams/cc	
Brittleness Temperature	-62 °F	-52 °C
Tear Resistance, Die B	114 ppi	20.0 kN/m
Tear Resistance, Die C	162 ppi	28.4 kN/m

**Compression Set**

Solid: 22 hrs @ 212°F (100°C)	13.1 %
Solid: 22 hrs @ 257°F (125°C)	15.4 %
Solid: 70 hrs @ 212°F (100°C)	25.8 %
Plied: 22 hrs @ 212°F (100°C)	28.6 %
Plied: 22 hrs @ 257°F (125°C)	29.3 %
Plied: 70 hrs @ 212°F (100°C)	21.6 %

**HEAT AGED: 70 hrs @ 212°F (100°C)**

Change - Tensile Strength	- 14.3 %
Change - Elongation	- 14.3 %
Change - Hardness, Shore A	+ 1

**HEAT AGED: 70 hrs @ 257°F (125°C)**

Change - Tensile Strength	- 2.9 %
Change - Elongation	- 26.2 %
Change - Hardness, Shore A	+ 2

**DISTILLED WATER AGED: 70 hrs @ 212°F (100°C)**

Change - Hardness, Shore A	- 5
Change - Volume	+ 4.5 %



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Change - Tensile Strength	- 22.2 %
Change - Elongation	- 2.4 %
Change - Hardness, Shore A	- 6
Change - Volume	+ 7.7 %

**ASTM REFERENCE FUEL B: 70 hrs @ RT (73°F, 23°C)**

Change - Tensile Strength	- 74.3 %
Change - Elongation	- 58.3 %
Change - Hardness, Shore A	- 16
Change - Volume	+ 43.1 %

**ASTM REFERENCE FUEL C: 70 hrs @ RT (73°F, 23°C)**

Change - Tensile Strength	- 83.4 %
Change - Elongation	- 69.0 %
Change - Hardness, Shore A	- 19
Change - Volume	+ 82.5 %

**ASTM OIL #1: 70 hrs @ 212°F (100°C)**

Change - Tensile Strength	+ 20.0 %
Change - Elongation	- 6.1 %
Change - Hardness, Shore A	- 1
Change - Volume	- 6.3 %

**ASTM OIL #1: 70 hrs @ 257°F (125°C)**

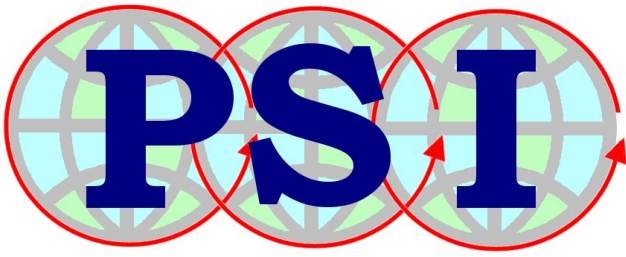
Change - Tensile Strength	+ 4.3 %
Change - Elongation	- 14.3 %
Change - Hardness, Shore A	+ 1
Change - Volume	- 5.7 %

**ASTM OIL #1: 70 hrs @ 302°F (150°C)**

Change - Tensile Strength	- 10.0 %
Change - Elongation	- 28.6 %
Change - Hardness, Shore A	- 3
Change - Volume	- 5.6 %

**ASTM OIL #3: 70 hrs @ 212°F (100°C)**

Change - Tensile Strength	- 19.7 %
Change - Elongation	- 15.1 %
Change - Hardness, Shore A	+ 11
Change - Volume	+ 18.1 %



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**ASTM OIL #3: 70 hrs @ 257°F (125°C)**

Change - Tensile Strength	- 28.6 %
Change - Elongation	- 22.6 %
Change - Hardness, Shore A	- 11
Change - Volume	+ 21.1 %

**ASTM OIL #3: 70 hrs @ 302°F (150°C)**

Change - Tensile Strength	- 26.8 %
Change - Elongation	- 21.4 %
Change - Hardness, Shore A	- 15
Change - Volume	+ 22.5 %