



Compound  
**7503**  
NITRILE - BUTADIENE  
50 DUROMETER - BLACK COLOR  
LOW TEMPERATURE RESISTANT

**PRODUCT DATA SHEET**

Compound 7503 is a 50 durometer black colored Buna N elastomer. It exhibits good low temperature flexibility and good resistance to compression set.

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

ASTM D2000 2 BG 512 B14 B34 EA14 EF11 EF21 EO34 F17  
5 BG 510 A14 B14 B34 EO34 F19

**This Compound is RoHS Compliant**

**Original Properties**

Modulus @ 100% Elongation	169 psi	1.2 MPa
Tensile Strength	1,352 psi	9.3 MPa
Ultimate Elongation	570 %	
Hardness, Shore A	49 Durometer	
Specific Gravity	1.16 grams/cc	
Brittleness Temperature	-72 °F	-58 °C
Tear Resistance, Die B	127 ppi	22.2 kN/m
Tear Resistance, Die C	162 ppi	28.4 kN/m

**Compression Set**

Solid: 22 hrs @ 212°F (100°C)	8.2 %
Solid: 70 hrs @ 212°F (100°C)	12.7 %
Plied: 22 hrs @ 212°F (100°C)	19.3 %
Plied: 70 hrs @ 212°F (100°C)	25.0 %

**HEAT AGED: 70 hrs @ 212°F (100°C)**

Change - Tensile Strength	+ 1.4 %
Change - Elongation	- 19.2 %
Change - Hardness, Shore A	+ 3

**HEAT AGED: 70 hrs @ 257°F (125°C)**

Change - Tensile Strength	+ 22.6 %
Change - Elongation	- 33.3 %
Change - Hardness, Shore A	+ 10



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Change - Tensile Strength	+ 22.6 %
Change - Elongation	- 33.3 %
Change - Hardness, Shore A	+ 10

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

Change - Hardness, Shore A	0
Change - Volume	+ 6.0 %

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

Change - Tensile Strength	- 14.6 %
Change - Elongation	- 17.5 %
Change - Hardness, Shore A	0
Change - Volume	+ 2.5 %

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

Change - Tensile Strength	- 58.9 %
Change - Elongation	- 56.1 %
Change - Hardness, Shore A	- 6
Change - Volume	+ 28.7 %

**ASTM OIL #1 (IRM 901): 70 hrs @ 212°F (100°C)**

Change - Tensile Strength	+ 39.5 %
Change - Elongation	- 3.5 %
Change - Hardness, Shore A	+ 3
Change - Volume	- 12.1 %

**ASTM OIL #3 (IRM 903): 70 hrs @ 212°F (100°C)**

Change - Tensile Strength	+ 5.7 %
Change - Elongation	- 12.3 %
Change - Hardness, Shore A	- 3
Change - Volume	+ 7.7 %

**Tear Resistance, Method D 624, Die B**

Tear Resistance	127.0 ppi
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**Tear Resistance, Method D 624, Die C**

Tear Resistance

162.0 ppi