

Compound
3847
 NITRILE BUTADIENE
 80 DUROMETER - BLACK COLOR
 LOW OIL & FUEL SWELL

PRODUCT DATA SHEET

Compound 3847 is an 80 durometer black colored general purpose Buna N elastomer. It exhibits very good resistance to compression set, petroleum based oils, aliphatic and aromatic fuels.

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

- ASTM D2000 2 BF 815 B14 B34 EO14
- 6 BG 815 A14 B14 B34 EO14
- 7 BG 815 B14 EA14 EO14 EF11 EF21
- 4 BK 815 A24 B14 B34 EO14 EF11 EF21
- 3 CH 815 A25 B14 B34 EO16 EO36
- 4 CH 815 A25 B14 EO15 EO35 EF31

AMS 3213



Original Properties

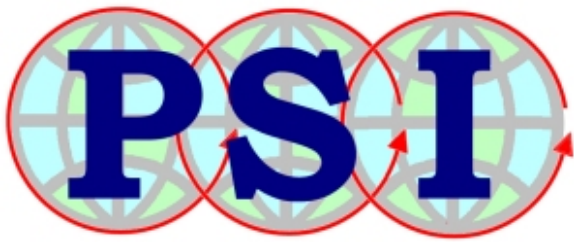
Modulus @ 50% Elongation	456 psi	3.1 MPa
Modulus @ 100% Elongation	1082 psi	7.5 MPa
Tensile Strength	1,925 psi	13.3 MPa
Ultimate Elongation	231 %	
Hardness, Shore A	80 Durometer	
Specific Gravity	1.35 grams/cc	
Brittleness Temperature	-30 °F	-34 °C
TR-10 Temperature	-23 °F	-31 °C
Tear Resistance, Die B	266.0 ppi	46.6 kN/m
Tear Resistance, Die C	191.0 ppi	33.5 kN/m

Compression Set

Solid: 22 hrs @ 212°F (100°C)	5.9 %
Solid: 22 hrs @ 257°F (125°C)	7.8 %
Solid: 70 hrs @ 212°F (100°C)	9.1 %
Plied: 22 hrs @ 212°F (100°C)	15.0 %
Plied: 22 hrs @ 257°F (125°C)	17.9 %
Plied: 70 hrs @ 212°F (100°C)	16.8 %

HEAT AGED: 70 hrs @ 212°F (100°C)

Change - Tensile Strength	+ 9.0 %
Change - Elongation	- 7.8 %
Change - Hardness, Shore A	+ 3



Compound

3847NITRILE BUTADIENE
80 DUROMETER - BLACK COLOR
LOW OIL & FUEL SWELL**PRODUCT DATA SHEET****HEAT AGED: 70 hrs @ 257°F (125°C)**

Change - Tensile Strength	+ 11.8 %
Change - Elongation	- 32.9 %
Change - Hardness, Shore A	+ 9

HEAT AGED: 70 hrs @ 212°F (100°C) Test Tube

Change - Tensile Strength	+ 9.0 %
Change - Elongation	- 7.8 %
Change - Hardness, Shore A	+ 3

HEAT AGED: 70 hrs @ 257°F (125°C) Test Tube Method

Change - Tensile Strength	+ 11.8 %
Change - Elongation	- 32.9 %
Change - Hardness, Shore A	+ 9

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

Change - Hardness, Shore A	- 3
Change - Volume	+ 6.0 %

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

Change - Tensile Strength	- 4.0 %
Change - Elongation	+ 0.4 %
Change - Hardness, Shore A	- 1
Change - Volume	- 0.3 %

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

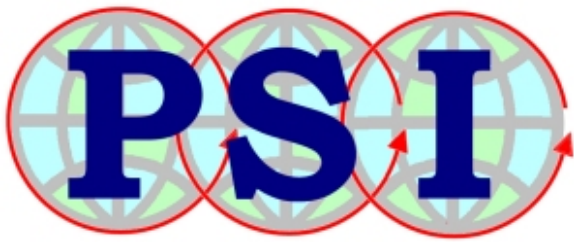
Change - Tensile Strength	- 14.9 %
Change - Elongation	- 13.0 %
Change - Hardness, Shore A	- 7
Change - Volume	+ 16.7 %

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

Change - Tensile Strength	- 16.0 %
Change - Elongation	- 13.0 %
Change - Hardness, Shore A	- 11
Change - Volume	+ 30.7 %

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

Change - Tensile Strength	+ 10.7 %
Change - Elongation	+ 0.4 %
Change - Hardness, Shore A	+ 5
Change - Volume	- 7.7 %



Compound

3847

NITRILE BUTADIENE
80 DUROMETER - BLACK COLOR
LOW OIL & FUEL SWELL

PRODUCT DATA SHEET

ASTM OIL #1 (IRM 901): 70 hrs @ 257°F (125°C)

Change - Tensile Strength	+ 15.6 %
Change - Elongation	+ 3.5 %
Change - Hardness, Shore A	+ 9
Change - Volume	- 8.1 %

ASTM OIL #1 (IRM 901): 70 hrs @ 302°F (150°C)

Change - Tensile Strength	+ 13.9 %
Change - Elongation	- 33.8 %
Change - Hardness, Shore A	+ 9
Change - Volume	- 8.1 %

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

Change - Tensile Strength	+ 9.8 %
Change - Elongation	- 1.3 %
Change - Hardness, Shore A	0
Change - Volume	- 0.3 %

ASTM OIL #3 (IRM 903): 70 hrs @ 257°F (125°C)

Change - Tensile Strength	+ 10.3 %
Change - Elongation	- 6.1 %
Change - Hardness, Shore A	+ 2
Change - Volume	+ 1.1 %

ASTM OIL #3 (IRM 903): 70 hrs @ 302°F (150°C)

Change - Tensile Strength	+ 17.1 %
Change - Elongation	- 23.8 %
Change - Hardness, Shore A	+ 2
Change - Volume	+ 1.6 %