



## Marco Compound # N1020

### 70 Durometer, Black, Low Temperature Neoprene

### Technical Datasheet

#### Common Names:

Neoprene, Chloroprene, CR

#### General Description:

Neoprene was the first synthetic rubber developed commercially and exhibits generally good ozone, aging and chemical resistance. Neoprene rubbers contain Chlorine in the polymer to reduce the reactivity to many oxidizing agents, as well as to oil and flame. Neoprene have good abrasion and tear resistance and are suitable for use in heating and air conditioning systems (HVAC), refrigeration units and numerous dynamic applications. N1000 is formulated to provide value with balance cost and performance. Please contact [engineering@marcorubber.com](mailto:engineering@marcorubber.com) for assistance in selecting a specialized compound when increased resistance to temperature, lubricants, or physical properties is required.

#### Features:

- Improved low temperature capabilities
- Low cost.
- Paraffin base mineral oil with low DPI, e.g. ASTM oil No. 1
- Silicone oil and grease
- Water and water solvents at low temperatures
- Resistant to refrigerants, ammonia, carbon dioxide
- Improved ozone, weathering and aging resistance compared with nitrile rubber.

#### Limitations:

- Aromatic hydrocarbons (benzene)
- Chlorinated hydrocarbons (trichloroethylene)
- Polar solvents (ketones, esters, ethers, acetones).

#### Service Temperature:

-50 to 250°F (-46 to 121°C)

#### Specification:

ASTM D2000 M5BC714 A14 B14 EO14 EO34 F19

### PHYSICAL PROPERTY STANDARDS

ORIGINAL PROPERTIES	ASTM D2000 Requirements	Typical Test Results
Hardness, Shore A	70 +/- 5	70
Color	Black	Black
Tensile Strength, MPa (psi)	14.0 (2,020)	16.8 (2,420)
Ultimate Elongation, %	300 min.	306

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<b>HEAT RESISTANCE – A14, ASTM D 573 (70 hrs. @ 100°C)</b>	<b>ASTM D2000 Requirements</b>	<b>Typical Test Results</b>
Hardness Change, points	+ 15	+6
Tensile Strength Change, %	- 15	-1
Ultimate Elongation Change, %	-40 max.	-16

<b>COMPRESSION SET – B14, ASTM D 325 Method B (22 hrs. @ 100°C)</b>	<b>ASTM D2000 Requirements</b>	<b>Typical Test Results</b>
Permanent Set %	35 max.	25

<b>FLUID RESISTANCE –ASTM #1 Oil – EO14, ASTM D 471 (70 hrs. @ 100°C)</b>	<b>ASTM D2000 Requirements</b>	<b>Typical Test Results</b>
Hardness Change, points	+/- 10	+2
Tensile Strength Change, %	-30 max.	0
Ultimate Elongation Change, %	-30 max.	-2
Volume Change, %	-10 to +15	-5

<b>FLUID RESISTANCE – IRM 903 Oil, -EO34, ASTM D 471 (70 hrs. @ 100°C)</b>	<b>ASTM D2000 Requirements</b>	<b>Typical Test Results</b>
Tensile Strength Change, %	-60 max.	-41
Ultimate Elongation Change, %	-60 max.	-36
Volume Change, %	+100 max.	+53

<b>LOW TEMPERATURE BRITTLINESS – F19</b>	<b>ASTM D2000 Requirements</b>	<b>Typical Test Results</b>
TEST AFTER 3 MIN @-55°C (-67)	NON-BRITTLE	NON-BRITTLE

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