

Technical data sheet in accordance with MIL -DTL-25988C Class

# Material

## 70 FVMQ F70

blue

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5

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10/10/2024

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### Physical properties

	nominal range	typical values	
<b>Density</b> ASTM D792	1.51 ±0.03	1.51	g/cm <sup>3</sup>
<b>Hardness</b> ASTM D2240, Shore A	70 ±5	70	Shore
<b>Tensile strength</b> ASTM D1414	> 5.2	5.7	MPa
<b>Tensile strength</b> ASTM D1414	> 750	824	Psi
<b>Elongation at break</b> ASTM D1414	> 125	234	%
<b>Compression set</b> ASTM D 395, 70 h, 24 °C, 25 %, CS>0.110 inch	< 15	12	%
<b>Compression set</b> ASTM D 395, 22 h, 175 °C, 25 %, CS>0.110 inch	< 30	13	%
<b>Low temperature test</b> ASTM D1329, TR10	< -70	-81	°F
<b>Low temperature test</b> ASTM D1329, TR10	< -57	-63	°C

**Declarations of conformity**  
No data found!

### Change after aging in Air: 70h/200°C

		nominal range		Typ. values	
		Nominal	Base value	After aging	difference
Hardness (ASTM D2240, Shore A)	Shore	---	70	69	-1
Tensile strength (ASTM D1414)	%	---			
Elongation at break (ASTM D1414)	%	---	234	227	-3 %
weight change	%	---		-0.5	

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### Change after aging in AMS 2629 Type 1: 22h/23°C

Hardness (ASTM D2240, Shore A)

Tensile strength (ASTM D1414)

Elongation at break (ASTM D1414)

volume change (ASTM D471)

Shore

%

%

%

#### nominal range

Nominal Base value After aging difference

--- 70 69 -1

--- 234 217 -7 %

--- 18.5

#### Typ. values

### Change after aging in AMS 3021: 70h/150°C

Hardness (ASTM D2240, Shore A)

Tensile strength (ASTM D1414)

Elongation at break (ASTM D1414)

volume change (ASTM D471)

Compression set (ASTM D395, Slab B, 70 h, 150 °C, 25 %, CS > 0.110 inch)

Shore

%

%

%

%

#### nominal range

Nominal Base value After aging difference

--- 70 61 -9

--- 234 254 9 %

--- 9.8

#### Typ. values

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**No ASTM D2000 properties available**

Attention!

O rings have after the finishing process (deburr) decrease of hardness through a mechanic strain up to 10 hardness units. Therefore the target area for the O-rings has to be specified on 65 +5/-10 IRHD (micro hardness)

The given values are based on a limited number of tests on standard test pieces (2mm sheets) produced in the laboratory. The data from finished parts can deviate from above values depending on the manufactories process and the component geometry.

The data represents our present empirical values. It is incumbent on the person placing the order to examine whether it is suitable for its intended purpose, before using the product. All questions regarding the guarantee of this product are in line with our terms and conditions, inasmuch as statutory provisions do not plan for something else.

## **Freudenberg**

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