

Technical data sheet in accordance with ASTM

# Material

## HNBR HN702704

black

cross linking: peroxidic

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### Physical properties

|   | nominal range  | typical values |                   |
|---|----------------|----------------|-------------------|
| <b>Density</b><br>ASTM D 1817   | 1.24 ±0.03     | 1.24           | g/cm <sup>3</sup> |
| <b>Hardness</b><br>ASTM D 2240, Shore A                                       | 70 ±5          | 70             | Shore             |
| <b>Tensile strength</b><br>ASTM D 412   | ---            | 18.9           | MPa               |
| <b>Elongation at break</b><br>ASTM D 412                                      | ---            | 140            | %                 |
| <b>Low temperature test</b><br>ASTM D 746, brittleness point                  | ---            | -43            | °C                |
| <b>Low temperature test</b><br>ASTM D 1329, TR10                              | ---            | -33            | °C                |
| <b>Compression set</b><br>ASTM D 395 B P.1, 168 h, 150 °C, 25 %               | ---            | 39             | %                 |
| <b>Compression set</b><br>ASTM D395 B P.2, 72 h, 0 °C, 25 %                   | ---            | 18             | %                 |
| <b>Compression set</b><br>ASTM D 395 B P.2, 72 h, -20 °C, 25 %                | ---            | 44             | %                 |
| <b>Compression set</b><br>DIN ISO 815, 24 h, 100 °C, 25 %                     | ---            | 18             | %                 |
| <b>Ozone Resistance</b><br>ASTM D 1149, 28 °C, 46 h, 200 pphm, 25% elongation | ---            | 0              | Rating            |
| <b>Temperature range</b>  | -40°C to 140°C |                |                   |

### Declarations of conformity

This overview is purely informative and does not constitute a declaration of conformity (DoC). Please refer to the actual declaration of conformity (DoC) including the conditions and its validity period.

|                   | Country | Part | Remark  | Expires |
|-------------------|---------|------|---|---------|
| Info ROHS and ELV |         |      | EU 2000/53 (ELV) including EU 2011/65 and EU2015/863 (ROHS III) | see DoC |

### Freudenberg

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### Change after aging in Air: 72h/150°C

Hardness (ASTM D 2240, Shore A)  
Tensile strength (ASTM D 412)  
Elongation at break (ASTM D 412)

Shore  
MPa  
%

| Typ. values |             |            |  |
|-------------|-------------|------------|--|
| Base value  | After aging | difference |  |
| 70          | 72          | 2          |  |
| 18.9        | 19.5        | 3 %        |  |
| 140         | 130.2       | -7 %       |  |

### Change after aging in Air: 168h/150°C

Hardness (ASTM D 2240, Shore A)  
Tensile strength (ASTM D 412)  
Elongation at break (ASTM D 412)

Shore  
MPa  
%

| Typ. values |             |            |  |
|-------------|-------------|------------|--|
| Base value  | After aging | difference |  |
| 70          | 79.5        | 10         |  |
| 18.9        | 17.4        | -8 %       |  |
| 140         | 95.8        | -32 %      |  |

### Change after aging in ASTM-Oil No. 2: 168h/100°C

Hardness (ASTM D 2240, Shore A)  
volume change (ASTM D 471)

Shore  
%

| Typ. values |             |            |  |
|-------------|-------------|------------|--|
| Base value  | After aging | difference |  |
| 70          | 64          | -6         |  |
|             | 17          |            |  |

### Change after aging in IRM 902: 168h/100°C

Hardness (ASTM D 2240, Shore A)  
volume change (ISO 1817)

Shore  
%

| Typ. values |             |            |  |
|-------------|-------------|------------|--|
| Base value  | After aging | difference |  |
| 70          | 66.5        | -4         |  |
|             | 9.9         |            |  |

### Change after aging in Pentane: 72h/23°C

Hardness (ASTM D 2240, Shore A)  
volume change (ISO 1817)

Shore  
%

| Typ. values |             |            |  |
|-------------|-------------|------------|--|
| Base value  | After aging | difference |  |
| 70          | 64.5        | -6         |  |
|             | 12.9        |            |  |

+ Air drying 168h / 40°C Volume/Volumen=-6,3 Hardness/Härte=+3,5

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**No ASTM D2000 properties available**

The given values are based on a limited number of tests on standard test pieces (2mm sheets). The data from finished parts can deviate from above values depending on the manufacturing 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.

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