

## DMH 311 H-NBR 90A

Highly saturated nitrile butadiene rubber

### Mechanical, Physical and Thermal Properties

| properties                  | condition | standard     | unit              | unit   | unit              | unit   |
|-----------------------------|-----------|--------------|-------------------|--------|-------------------|--------|
| colour                      |           |              |                   | black  |                   | black  |
| hardness                    | 23°C      | ISO 868      | Shore A           | 90 ± 5 | Shore A           | 90 ± 5 |
| modulus 100%                | 23°C      | DIN 53 504   | MPa               | ≥ 6    | psi               | ≥ 870  |
| tensile strength            | 23°C      | DIN 53 504   | MPa               | ≥ 9    | psi               | ≥ 1305 |
| elongation at break         | 23°C      | DIN 53 504   | %                 | ≥ 220  | %                 | ≥ 220  |
| tear strength               | 23°C      | DIN ISO 34-1 | kN/m              | ≥ 20   | lbf/inch          | ≥ 114  |
| spec. gravity               | 23°C      | ISO 1183     | kg/m <sup>3</sup> | ≥ 1450 | g/cm <sup>3</sup> | ≥ 1,45 |
| rebound elasticity          | 23°C      | DIN 53 512   | %                 | 30     | %                 | 30     |
| abrasion                    | 23°C      | DIN 53 516   | mm <sup>3</sup>   | 130    | mm <sup>3</sup>   | 130    |
| compression set             | *         | ISO 815      | %                 | ≤ 26   | %                 | ≤ 26   |
| compression set             | **        | ISO 815      | %                 | ≤ 32   | %                 | ≤ 32   |
| compression set             | ***       | ISO 815      | %                 |        | %                 |        |
| minimum service temperature |           |              | °C                | -20    | °F                | -4     |
| maximum service temperature |           |              | °C                | 150    | °F                | 302    |
| temp. max water/steam       |           |              | °C                | 120    | °F                | 248    |
| temp. max hot air, short    |           |              | °C                | 180    | °F                | 356    |

\* 24h 70°C 25% def.

\*\* 24h 100°C 25% def.

\*\*\* 24h 150°C 25% def.

### Chemical Properties

Copolymer, based on butadiene and acrylonitrile

Resistant to: oil, petrol, hot water, hot air, ozone and crude oil

Not resistant to: conc. Acides, conc. lyes and polar solvents

Foodstuff approval: FDA compliant

Maximum recommended service temperature (FDA applications): 90 °C

Detailed information concerning chemical resistance see DMH Chemical Resistance Guide

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