

## DMH 109 HPU / U2 Mechanical, Physical and Thermal Properties

thermoplastic polyurethane with resistance to hydrolysis

| properties                  | condition | standard     | unit              | unit   | unit              | unit   |
|-----------------------------|-----------|--------------|-------------------|--------|-------------------|--------|
| colour                      |           |              |                   | nature |                   | nature |
| hardness                    | 23°C      | ISO 868      | Shore A           | 95 ± 2 | Shore A           | 95 ± 2 |
| hardness                    | 23°C      | ISO 868      | Shore D           | 48 ± 3 | Shore D           | 48 ± 3 |
| modulus 100%                | 23°C      | DIN 53 504   | MPa               | ≥ 15   | psi               | ≥ 2175 |
| modulus 300 %               | 23°C      | DIN 53 504   | MPa               | ≥ 28   | psi               | ≥ 4160 |
| tensile strength            | 23°C      | DIN 53 504   | MPa               | ≥ 50   | psi               | ≥ 7250 |
| elongation at break         | 23°C      | DIN 53 504   | %                 | ≥ 350  | %                 | ≥ 350  |
| tear strength               | 23°C      | DIN ISO 34-1 | kN/m              | ≥ 110  | lbf/inch          | ≥ 570  |
| spec. gravity               | 23°C      | ISO 1183     | kg/m <sup>3</sup> | 1200   | g/cm <sup>3</sup> | 1,2    |
| abrasion                    | 23°C      | DIN 53 516   | mm <sup>3</sup>   | 17     | mm <sup>3</sup>   | 17     |
| compression set             | *         | ISO 815      | %                 | ≤ 27   | %                 | ≤ 27   |
| compression set             | **        | ISO 815      | %                 | ≤ 33   | %                 | ≤ 33   |
| minimum service temperature |           |              | °C                | -20    | °F                | -4     |
| maximum service temperature |           |              | °C                | 115    | °F                | 240    |

\* 24h 70°C 25% def.

\*\* 24h 100°C 25% def.

## Chemical Properties

Copolymer, based on aromatic isocyanate and diols

Resistant to oil, hot water, hot air, ozone, synthetic and native esters

Not resistant to conc. acids, conc. lyes, conc. alcohols and aromatic solvents

Foodstuff approval: FDA

10/2011 EC

Detailed information concerning chemical resistance see DMH Chemical Resistance Guide

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