

## TECAFORM AH natural - Stock Shapes

### Chemical Designation

POM-C (Polyacetal (Copolymer))

### Colour

natural opaque

### Density

1.41 g/cm<sup>3</sup>

### Main features

- high strength
- resistant against cleaning agent
- stiff
- high toughness
- very good electrical insulation
- good machinability
- good slide and wear properties
- difficult to bond

### Target Industries

- mechanical engineering
- conveyor technology
- precision engineering
- automotive industry
- food engineering
- electrical engineering
- home appliances
- medical technology

| Mechanical properties                 | parameter                                      | value            | unit                             | norm                 | comment        |
|---------------------------------------|--|------------------|----------------------------------|----------------------|----------------|
| Modulus of elasticity (tensile test)  | 1mm/min  | 2800             | MPa                              | DIN EN ISO 527-2     | 1)             |
| Tensile strength                      | 50mm/min                                       | 67               | MPa                              | DIN EN ISO 527-2     |                |
| Tensile strength at yield             | 50mm/min                                       | 67               | MPa                              | DIN EN ISO 527-2     |                |
| Elongation at yield                   | 50mm/min                                       | 9                | %                                | DIN EN ISO 527-2     |                |
| Elongation at break                   | 50mm/min                                       | 32               | %                                | DIN EN ISO 527-2     |                |
| Flexural strength                     | 2mm/min, 10 N                                  | 91               | MPa                              | DIN EN ISO 178       | 2)             |
| Modulus of elasticity (flexural test) | 2mm/min, 10 N                                  | 2600             | MPa                              | DIN EN ISO 178       |                |
| Compression strength                  | 1% / 2%<br>5mm/min, 10 N                       | 20 / 35          | MPa                              | EN ISO 604           | 3)             |
| Compression modulus                   | 5mm/min, 10 N                                  | 2300             | MPa                              | EN ISO 604           | 4)             |
| Impact strength (Charpy)              | max. 7,5J                                      | n.b.             | kJ/m <sup>2</sup>                | DIN EN ISO 179-1eU   | 5)             |
| Notched impact strength (Charpy)      | max. 7,5J                                      | 8                | kJ/m <sup>2</sup>                | DIN EN ISO 179-1eA   |                |
| Ball indentation hardness             |  | 165              | MPa                              | ISO 2039-1           | 6)             |
| <b>Thermal properties</b>             | <b>parameter</b>                               | <b>value</b>     | <b>unit</b>                      | <b>norm</b>          | <b>comment</b> |
| Glass transition temperature          |  | -60              | °C                               | DIN 53765            | 1)             |
| Melting temperature                   |  | 166              | °C                               | DIN 53765            |                |
| Service temperature                   | short term                                     | 140              | °C                               |                      | 2)             |
| Service temperature                   | long term                                      | 100              | °C                               |                      |                |
| Thermal expansion (CLTE)              | 23-60°C, long.                                 | 13               | 10 <sup>-5</sup> K <sup>-1</sup> | DIN EN ISO 11359-1;2 |                |
| Thermal expansion (CLTE)              | 23-100°C, long.                                | 14               | 10 <sup>-5</sup> K <sup>-1</sup> | DIN EN ISO 11359-1;2 |                |
| Specific heat                         |  | 1.4              | J/(g*K)                          | ISO 22007-4:2008     |                |
| Thermal conductivity                  |  | 0.39             | W/(K*m)                          | ISO 22007-4:2008     |                |
| <b>Electrical properties</b>          | <b>parameter</b>                               | <b>value</b>     | <b>unit</b>                      | <b>norm</b>          | <b>comment</b> |
| Specific surface resistance           | Silver electrode, 23°C,<br>12% r.h.            | 10 <sup>14</sup> | Ω                                | DIN IEC 60093        | 1)             |
| Specific volume resistance            | Silver electrode, 23°C,<br>12% r.h.            | 10 <sup>13</sup> | Ω*cm                             | DIN IEC 60093        | 2)             |
| Dielectric strength                   | 23°C, 50% r.h.                                 | 49               | kV/mm                            | ISO 60243-1          | 2)             |
| Resistance to tracking (CTI)          | Platin electrode, 23°C,<br>50% r.h., solvent A | 600              | V                                | DIN EN 60112         |                |
| <b>Other properties</b>               | <b>parameter</b>                               | <b>value</b>     | <b>unit</b>                      | <b>norm</b>          | <b>comment</b> |
| Water absorption                      | 24h / 96h (23°C)                               | 0.05 / 0.1       | %                                | DIN EN ISO 62        | 1)             |
| Resistance to hot water/ bases        |  | (+)              | -                                | -                    | 2)             |
| Resistance to weathering              |  | -                | -                                | -                    | 3)             |
| Flammability (UL94)                   | corresponding to                               | HB               |                                  | DIN IEC 60695-11-10; | 4)             |

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