

## TECAFORM AH blue - Stock Shapes (rods, plates, tubes)

### Chemical Designation

POM-C (Polyacetal (Copolymer))

### Colour

blue opaque

### Density

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

### Main features

- high strength
- high toughness
- good chemical resistance
- good machinability
- very good electrical insulation
- easy to polish
- difficult to bond
- good slide and wear properties

### Target Industries

- mechanical engineering
- electronics
- food technology
- automotive industry

| Mechanical properties                 | parameter                        | value            | unit                             | norm                 | comment                                                                                                                                                                                         |
|---------------------------------------|----------------------------------|------------------|----------------------------------|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tensile strength                      | 50mm/min                         | 67               | MPa                              | DIN EN ISO 527-2     | (1) For tensile test: specimen type 1b                                                                                                                                                          |
| Modulus of elasticity (tensile test)  | 1mm/min                          | 2800             | MPa                              | DIN EN ISO 527-2     | (2) For flexural test: support span 64mm, norm specimen.                                                                                                                                        |
| Tensile strength at yield             | 50mm/min                         | 67               | MPa                              | DIN EN ISO 527-2     | (3) Specimen 10x10x10mm                                                                                                                                                                         |
| Elongation at yield (tensile test)    | 50mm/min                         | 9                | %                                | DIN EN ISO 527-2     | (4) Specimen 10x10x50mm, modulus range between 0,5 and 1% compression.                                                                                                                          |
| Elongation at break (tensile test)    | 50mm/min                         | 32               | %                                | DIN EN ISO 527-2     | (5) For Charpy test: support span 64mm, norm specimen.                                                                                                                                          |
| Flexural strength                     | 2mm/min, 10 N                    | 91               | MPa                              | DIN EN ISO 178       | n.b. = not broken                                                                                                                                                                               |
| 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                        | 9                | kJ/m <sup>2</sup>                | DIN EN ISO 179-1eA   |                                                                                                                                                                                                 |
| Shore hardness                        | D                                | 81               |                                  | DIN EN ISO 868       |                                                                                                                                                                                                 |
| Thermal properties                    | parameter                        | value            | unit                             | norm                 | comment                                                                                                                                                                                         |
| Glass transition temperature          |                                  | -60              | °C                               | DIN EN ISO 11357     | (1) Found in public sources.                                                                                                                                                                    |
| Melting temperature                   |                                  | 166              | °C                               | DIN EN ISO 11357     | (2) Found in public sources.                                                                                                                                                                    |
| Service temperature                   | short term                       | 140              | °C                               |                      | Individual testing regarding application conditions is mandatory.                                                                                                                               |
| 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 |                                                                                                                                                                                                 |
| Electrical properties                 | parameter                        | value            | unit                             | norm                 | comment                                                                                                                                                                                         |
| surface resistivity                   | Silver electrode, 23°C, 12% r.h. | 10 <sup>14</sup> | Ω                                | -                    | (1) Specimen in 20mm thickness                                                                                                                                                                  |
| volume resistivity                    | Silver electrode, 23°C, 12% r.h. | 10 <sup>14</sup> | Ω*cm                             | -                    | (2) Specimen in 20mm thickness                                                                                                                                                                  |
| Other properties                      | parameter                        | value            | unit                             | norm                 | comment                                                                                                                                                                                         |
| Water absorption                      | 24h / 96h (23°C)                 | 0.05 / 0.1       | %                                | DIN EN ISO 62        | (1) Ø ca. 50mm, h=13mm                                                                                                                                                                          |
| Resistance to hot water/ bases        |                                  | (+)              |                                  | -                    | (2) (+) limited resistance                                                                                                                                                                      |
| Resistance to weathering              |                                  | -                |                                  | -                    | (3) - poor resistance                                                                                                                                                                           |
| Flammability (UL94)                   | corresponding to                 | HB               |                                  | DIN IEC 60695-11-10; | (4) Corresponding means no listing at UL (yellow card). The information might be taken from resin, stock shape or estimation. Individual testing regarding application conditions is mandatory. |

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Date: 2023/07/19

Version: AD