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

**Chemical Designation**
POM-C (Polyacetal (Copolymer))

**Colour**
blue opaque

**Density**
1.41 g/cm$^3$

**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<br>(2) For flexural test: support span 64mm, norm specimen.<br>(3) Specimen 10x10x10mm<br>(4) Specimen 10x10x50mm, modulus range between 0,5 and 1% compression.<br>(5) For Charpy test: support span 64mm, norm specimen.<br>n.b.= not broken |
| Modulus of elasticity (tensile test) | 1mm/min | 2800 | MPa | DIN EN ISO 527-2 | 1) | |
| Tensile strength at yield | 50mm/min | 67 | MPa | DIN EN ISO 527-2 | | |
| Elongation at yield (tensile test) | 50mm/min | 9 | % | DIN EN ISO 527-2 | | |
| Elongation at break (tensile test) | 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$^2$ | DIN EN ISO 179-1eU | 5) | |
| Notched impact strength (Charpy) | max. 7,5J | 9 | kJ/m$^2$ | 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) | (1) Found in public sources.<br>(2) Found in public sources. Individual testing regarding application conditions is mandatory. |
| Melting temperature | | 166 | °C | DIN EN ISO 11357 | | |
| Service temperature | short term | 140 | °C | | 2) | |
| Service temperature | long term | 100 | °C | | | |
| Thermal expansion (CLTE) | 23-60°C, long. | 13 | $10^{-5}$ K$^{-1}$ | DIN EN ISO 11359-1;2 | | |
| Thermal expansion (CLTE) | 23-100°C, long. | 14 | $10^{-5}$ K$^{-1}$ | DIN EN ISO 11359-1;2 | | |

| Electrical properties | parameter | value | unit | norm | | comment |
|---|---|---|---|---|---|---|
| surface resistivity | Silver electrode, 23°C, 12% r.h. | $10^{14}$ | Ω | - | 1) | (1) Specimen in 20mm thickness<br>(2) Specimen in 20mm thickness |
| volume resistivity | Silver electrode, 23°C, 12% r.h. | $10^{14}$ | Ω*cm | - | 2) | |

| Other properties | parameter | value | unit | norm | | comment |
|---|---|---|---|---|---|---|
| Water absorption | 24h / 96h (23°C) | 0.05 / 0.1 | % | DIN EN ISO 62 | 1) | (1) Ø ca. 50mm, h=13mm<br>(2) (+) limited resistance<br>(3) - poor resistance<br>(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. |
| Resistance to hot water/ bases | | (+) | | - | 2) | |
| Resistance to weathering | | - | | - | 3) | |
| Flammability (UL94) | corresponding to | HB | | DIN IEC 60695-11-10; | 4) | |



**Manufactured by: Ensinger Group, a German based plastic manufacturer**

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