

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

## Chemical Designation

POM-C (Polyacetal (Copolymer))

## Colour

ivory opaque

## Density

1.35 g/cm<sup>3</sup>

## Fillers

antistatic agent

## Main features

- antistatic
- soot-free
- high strength
- good wear properties
- good chemical resistance
- high stiffness
- difficult to bond
- high toughness

## Target Industries

- semiconductor technology
- chemical technology
- electronics
- mechanical engineering

## Mechanical properties

|                                       | parameter                     | value    | unit              | norm               | comment |
|---------------------------------------|-------------------------------|----------|-------------------|--------------------|---------|
| Tensile strength                      | 50mm/min                      | 39       | MPa               | DIN EN ISO 527-2   |         |
| Modulus of elasticity (tensile test)  | 1mm/min                       | 1300     | MPa               | DIN EN ISO 527-2   | 1)      |
| Tensile strength at yield             | 50mm/min                      | 39       | MPa               | DIN EN ISO 527-2   |         |
| Elongation at yield (tensile test)    | 50mm/min                      | 23       | %                 | DIN EN ISO 527-2   |         |
| Elongation at break (tensile test)    | 50mm/min                      | 23       | %                 | DIN EN ISO 527-2   |         |
| Flexural strength                     | 2mm/min, 10 N                 | 46       | MPa               | DIN EN ISO 178     | 2)      |
| Modulus of elasticity (flexural test) | 2mm/min, 10 N                 | 1200     | MPa               | DIN EN ISO 178     |         |
| Compression strength                  | 1% / 2% / 5%<br>5mm/min, 10 N | 12/19/34 | MPa               | EN ISO 604         | 3)      |
| Compression modulus                   | 5mm/min, 10 N                 | 1100     | 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                             | 74       |                   | DIN EN ISO 868     |         |

## Thermal properties

|                              | parameter       | value   | unit                             | norm                 | comment |
|------------------------------|-----------------|---------|----------------------------------|----------------------|---------|
| Glass transition temperature |                 | -60     | °C                               | DIN EN ISO 11357     | 1)      |
| Melting temperature          |                 | 165     | °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.  | 16      | 10 <sup>-5</sup> K <sup>-1</sup> | DIN EN ISO 11359-1;2 |         |
| Thermal expansion (CLTE)     | 23-100°C, long. | 17      | 10 <sup>-5</sup> K <sup>-1</sup> | DIN EN ISO 11359-1;2 |         |
| Specific heat                | 1.6             | J/(g*K) |                                  | ISO 22007-4:2008     |         |
| Thermal conductivity         | 0.30            | W/(K*m) |                                  | ISO 22007-4:2008     |         |

## Electrical properties

|                              | parameter                                   | value                             | unit  | norm         | comment |
|------------------------------|---|-----------------------------------|-------|--------------|---------|
| surface resistivity          | Silver electrode, 23°C, 50% r.h.            | 10 <sup>9</sup> -10 <sup>11</sup> | Ω     | -            | 1)      |
| volume resistivity           | Silver electrode, 23°C, 50% r.h.            | 10 <sup>9</sup>                   | Ω*cm  | -            |         |
| Dielectric strength          | 23°C, 50% r.h.                              | 5                                 | kV/mm | ISO 60243-1  | 2)      |
| Resistance to tracking (CTI) | Platin electrode, 23°C, 50% r.h., solvent A | 600                               | V     | DIN EN 60112 |         |

## Other properties

|                                | parameter        | value     | unit | norm                 | comment |
|--------------------------------|------------------|-----------|------|----------------------|---------|
| Water absorption               | 24h / 96h (23°C) | 0.9 / 1.8 | %    | 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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