

# Stanyl<sup>®</sup> MC50

## PA46–GF35 FR

35% Glass Fiber Reinforced, Flame Retardant (halogen– phosphorous–free)

Print Date: 2025–10–04

Stanyl MC50 is a special V–2 rated material with high flow. The Flame Retardant type is Nitrogen–based.

| PROPERTIES                                   | TYPICAL DATA | UNIT              | TEST METHOD    |
|--|--------------|-------------------|----------------|
| <b>RHEOLOGICAL PROPERTIES</b>                |              |                   |                |
|  | DRY / COND   |                   |                |
| Molding shrinkage (parallel)                 | 0.4 / *      | %                 | ISO 294–4      |
| Molding shrinkage (normal)                   | 1.1 / *      | %                 | ISO 294–4      |
| <b>MECHANICAL PROPERTIES</b>                 |              |                   |                |
|  | DRY / COND   |                   |                |
| Tensile modulus                              | 12500 / 8000 | MPa               | ISO 527–1/–2   |
| Stress at break                              | 200 / 140    | MPa               | ISO 527–1/–2   |
| Strain at break                              | 2.5 / 3.6    | %                 | ISO 527–1/–2   |
| Flexural modulus                             | 12500 / 8000 | MPa               | ISO 178        |
| Charpy impact strength (+23°C)               | 60 / 70      | kJ/m <sup>2</sup> | ISO 179/1eU    |
| Charpy notched impact strength (+23°C)       | 12 / 13      | kJ/m <sup>2</sup> | ISO 179/1eA    |
| Izod notched impact strength (+23°C)         | 11 / –       | kJ/m <sup>2</sup> | ISO 180/1A     |
| <b>THERMAL PROPERTIES</b>                    |              |                   |                |
|  | DRY / COND   |                   |                |
| Melting temperature (10°C/min)               | 295 / *      | °C                | ISO 11357–1/–3 |
| Temp. of deflection under load (1.80 MPa)    | 290 / *      | °C                | ISO 75–1/–2    |
| Temp. of deflection under load (0.45 MPa)    | 290 / *      | °C                | ISO 75–1/–2    |
| Coeff. of linear therm. expansion (parallel) | 0.35         | E–4/°C            | ASTM D696      |
| Coeff. of linear therm. expansion (normal)   | 0.4          | E–4/°C            | ASTM D696      |
| Relative Temperature Index – electrical      | 65           | °C                | UL746B         |
| RTI electrical (Thickness (1) tested)        | 0.75         | mm                | UL746B         |
| <b>ELECTRICAL PROPERTIES</b>                 |              |                   |                |
|  | DRY / COND   |                   |                |

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Property Data

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| PROPERTIES                    | TYPICAL DATA | UNIT  | TEST METHOD    |
|-------------------------------|--------------|-------|----------------|
| Volume resistivity            | >1E13 / 1E11 | Ohm*m | IEC 62631-3-1  |
| Electric strength             | 33 / 30      | kV/mm | IEC 60243-1    |
| Comparative tracking index    | 425 / –      | V     | IEC 60112      |
| Relative permittivity (100Hz) | 4.8 / 11.2   | –     | IEC 62631-2-1  |
| Relative permittivity (1 MHz) | 4.4 / 5.2    | –     | IEC 62631-2-1  |
| OTHER PROPERTIES              |              |       |                |
|                               | DRY / COND   |       |                |
| Humidity absorption           | 2.3 / *      | %     | Sim. to ISO 62 |
| Density                       | 1490 / –     | kg/m³ | ISO 1183       |

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