

# Stanyl<sup>®</sup> 46HF4530

## PA46–GF30

30% Glass Fiber Reinforced, High Flow, Electro–friendly

Print Date: 2026–04–09

| <i>PROPERTIES</i>             | <i>TYPICAL DATA</i> | <i>UNIT</i> | <i>TEST METHOD</i> |
|-------------------------------|---------------------|-------------|--------------------|
| <b>RHEOLOGICAL PROPERTIES</b> |                     |             |                    |
|                               | <i>DRY / COND</i>   |             |                    |
| Molding shrinkage [parallel]  | 0.5 / *             | %           | Sim. to ISO 294–4  |
| Molding shrinkage [normal]    | 1.3 / *             | %           | Sim. to ISO 294–4  |
| <b>MECHANICAL PROPERTIES</b>  |                     |             |                    |
|                               | <i>DRY / COND</i>   |             |                    |
| Tensile modulus               | 10000 / 6000        | MPa         | ISO 527–1/–2       |
| Tensile modulus (120°C)       | 5800 / –            | MPa         | ISO 527–1/–2       |
| Tensile modulus (160°C)       | 5300                | MPa         | ISO 527–1/–2       |
| Tensile modulus (180°C)       | 5000                | MPa         | ISO 527–1/–2       |
| Tensile modulus (200°C)       | 4700                | MPa         | ISO 527–1/–2       |
| Stress at break               | 180 / 120           | MPa         | ISO 527–1/–2       |
| Stress at break (120°C)       | 115 / –             | MPa         | ISO 527–1/–2       |
| Stress at break (160°C)       | 100                 | MPa         | ISO 527–1/–2       |
| Stress at break (180°C)       | 95                  | MPa         | ISO 527–1/–2       |
| Stress at break (200°C)       | 90                  | MPa         | ISO 527–1/–2       |
| Strain at break               | 2.5 / 5             | %           | ISO 527–1/–2       |
| Strain at break (120°C)       | 5 / –               | %           | ISO 527–1/–2       |
| Strain at break (160°C)       | 5                   | %           | ISO 527–1/–2       |
| Strain at break (180°C)       | 5                   | %           | ISO 527–1/–2       |
| Strain at break (200°C)       | 5                   | %           | ISO 527–1/–2       |
| Flexural modulus              | 9500 / 5500         | MPa         | ISO 178            |
| Flexural modulus (120°C)      | 5100                | MPa         | ISO 178            |
| Flexural modulus (160°C)      | 4900                | MPa         | ISO 178            |
| Flexural strength             | 270 / 160           | MPa         | ISO 178            |

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## Property Data

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| <i>PROPERTIES</i>                      | <i>TYPICAL DATA</i> | <i>UNIT</i>       | <i>TEST METHOD</i> |
|--|---------------------|-------------------|--------------------|
| Flexural strength (120°C)              | 140                 | MPa               | ISO 178            |
| Flexural strength (160°C)              | 125                 | MPa               | ISO 178            |
| Charpy impact strength (+23°C)         | 60 / 90             | kJ/m <sup>2</sup> | ISO 179/1eU        |
| Charpy impact strength (-30°C)         | 60 / 60             | kJ/m <sup>2</sup> | ISO 179/1eU        |
| Charpy notched impact strength (+23°C) | 10 / 15             | kJ/m <sup>2</sup> | ISO 179/1eA        |
| Charpy notched impact strength (-30°C) | 10 / 10             | kJ/m <sup>2</sup> | ISO 179/1eA        |

### *THERMAL PROPERTIES*

#### *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) | 0.25    | E-4/°C | ASTM D696       |
| Coeff. of linear therm. expansion (normal)   | 0.6     | E-4/°C | ASTM D696       |
| Burning Behav. at 1.5 mm nom. thickn.        | HB / *  | class  | IEC 60695-11-10 |
| Thickness tested                             | 1.5 / * | mm     | IEC 60695-11-10 |
| UL recognition                               | Yes / * | -      | -               |
| Burning Behav. at 3.0 mm nom. thickn.        | HB / *  | class  | IEC 60695-11-10 |
| Thickness tested                             | 3 / *   | mm     | IEC 60695-11-10 |
| UL recognition                               | Yes / * | -      | -               |
| Relative Temperature Index – electrical      | 65      | °C     | UL746B          |
| RTI electrical (Thickness (1) tested)        | 0.75    | mm     | UL746B          |

### *ELECTRICAL PROPERTIES*

#### *DRY / COND*

|                               |            |       |                 |
|-------------------------------|------------|-------|-----------------|
| Volume resistivity            | 1E13 / 1E9 | Ohm*m | IEC 62631-3-1   |
| Electric strength             | 30 / 25    | kV/mm | IEC 60243-1     |
| Comparative tracking index    | 550 / -    | V     | IEC 60112       |
| Relative permittivity (100Hz) | 4.4 / 12   | -     | IEC 62631-2-1   |
| Relative permittivity (1 MHz) | 4 / 4.6    | -     | IEC 62631-2-1   |
| Relative permittivity (1GHz)  | 3.6 / -    | -     | IEC 61189-2-721 |

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| PROPERTIES              | TYPICAL DATA      | UNIT              | TEST METHOD    |
|-------------------------|-------------------|-------------------|----------------|
| <b>OTHER PROPERTIES</b> | <b>DRY / COND</b> |                   |                |
| Humidity absorption     | 2.5 / *           | %                 | Sim. to ISO 62 |
| Density                 | 1410 / -          | kg/m <sup>3</sup> | ISO 1183       |

Tens. fatigue 8Hz, T, R=0.1,  
dry

