

# Stanyl® TE250F9

## PA46-GF45 FR(17)

45% Glass Reinforced, Heat Stabilized, Flame Retardant

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| Properties                             | Typical Data  | Unit              | Test Method       |
|----------------------------------------|---------------|-------------------|-------------------|
| <b>Rheological properties</b>          |               |                   |                   |
|                                        | dry / cond    |                   |                   |
| Molding shrinkage [parallel]           | 0.3 / *       | %                 | Sim. to ISO 294-4 |
| Molding shrinkage [normal]             | 0.9 / *       | %                 | Sim. to ISO 294-4 |
| <b>Mechanical properties</b>           |               |                   |                   |
|                                        | dry / cond    |                   |                   |
| Tensile modulus                        | 17000 / 12000 | MPa               | ISO 527-1/-2      |
| Tensile modulus (120°C)                | 11000 / -     | MPa               | ISO 527-1/-2      |
| Tensile modulus (160°C)                | 10000         | MPa               | ISO 527-1/-2      |
| Stress at break                        | 200 / 130     | MPa               | ISO 527-1/-2      |
| Stress at break (120°C)                | 130 / -       | MPa               | ISO 527-1/-2      |
| Stress at break (160°C)                | 120           | MPa               | ISO 527-1/-2      |
| Strain at break                        | 2 / 3         | %                 | ISO 527-1/-2      |
| Strain at break (120°C)                | 3 / -         | %                 | ISO 527-1/-2      |
| Strain at break (160°C)                | 3             | %                 | ISO 527-1/-2      |
| Flexural modulus                       | 15000 / 11000 | MPa               | ISO 178           |
| Flexural modulus (120°C)               | 10500         | MPa               | ISO 178           |
| Flexural modulus (160°C)               | 9000          | MPa               | ISO 178           |
| Charpy impact strength (+23°C)         | 65 / 75       | kJ/m <sup>2</sup> | ISO 179/1eU       |
| Charpy impact strength (-30°C)         | 50 / 50       | kJ/m <sup>2</sup> | ISO 179/1eU       |
| Charpy notched impact strength (+23°C) | 13 / 15       | kJ/m <sup>2</sup> | ISO 179/1eA       |
| Charpy notched impact strength (-30°C) | 13 / 13       | kJ/m <sup>2</sup> | ISO 179/1eA       |
| Izod notched impact strength (+23°C)   | 13 / 15       | kJ/m <sup>2</sup> | ISO 180/1A        |
| Izod notched impact strength (-40°C)   | 13 / 13       | kJ/m <sup>2</sup> | ISO 180/1A        |

| Properties                                   | Typical Data | Unit              | Test Method            |
|----------------------------------------------|--------------|-------------------|------------------------|
| <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) | 0.2 / *      | E-4/°C            | ISO 11359-1/-2         |
| Coeff. of linear therm. expansion (normal)   | 0.45 / *     | E-4/°C            | ISO 11359-1/-2         |
| Burning Behav. at 1.5 mm nom. thickn.        | V-0 / *      | class             | IEC 60695-11-10        |
| Thickness tested                             | 1.5 / *      | mm                | IEC 60695-11-10        |
| UL recognition                               | Yes / *      | -                 | -                      |
| Burning Behav. at thickness h                | V-0 / *      | class             | IEC 60695-11-10        |
| Thickness tested                             | 0.75 / *     | mm                | IEC 60695-11-10        |
| UL recognition                               | Yes / *      | -                 | -                      |
| Relative Temperature Index - electrical      | 140          | °C                | UL746B                 |
| RTI electrical (Thickness (1) tested)        | 0.75         | mm                | UL746B                 |
| Thermal Index 5000 hrs                       | 163          | °C                | IEC 60216/ISO 527-1/-2 |
| <b>Electrical properties</b>                 |              |                   |                        |
|                                              | dry / cond   |                   |                        |
| Volume resistivity                           | 1E13 / 1E8   | Ohm*m             | IEC 60093              |
| Electric strength                            | 30 / 20      | kV/mm             | IEC 60243-1            |
| Comparative tracking index                   | 250 / -      | V                 | IEC 60112              |
| Relative permittivity (100Hz)                | 4.3 / 12     | -                 | IEC 60250              |
| Relative permittivity (1 MHz)                | 4 / 4.5      | -                 | IEC 60250              |
| <b>Other properties</b>                      |              |                   |                        |
|                                              | dry / cond   |                   |                        |
| Humidity absorption                          | 1.3 / *      | %                 | Sim. to ISO 62         |
| Density                                      | 1820 / -     | kg/m <sup>3</sup> | ISO 1183               |