

# Stanyl® TS250F4D

## PA46-GF20 FR(17)

20% Glass Reinforced, Flame Retardant, Heat Stabilized, Improved resistance to blistering during reflow – soldering process

Print Date: 2019-04-09

| Properties                                   | Typical Data | Unit              | Test Method       |
|----------------------------------------------|--------------|-------------------|-------------------|
| <b>Rheological properties</b>                |              |                   |                   |
|                                              | dry / cond   |                   |                   |
| Molding shrinkage [parallel]                 | 0.8 / *      | %                 | Sim. to ISO 294-4 |
| Molding shrinkage [normal]                   | 1.3 / *      | %                 | Sim. to ISO 294-4 |
| <b>Mechanical properties</b>                 |              |                   |                   |
|                                              | dry / cond   |                   |                   |
| Tensile modulus                              | 9200 / 6000  | MPa               | ISO 527-1/-2      |
| Stress at break                              | 150 / 100    | MPa               | ISO 527-1/-2      |
| Strain at break                              | 2.5 / 4      | %                 | ISO 527-1/-2      |
| Charpy notched impact strength (+23°C)       | 10 / 10      | kJ/m <sup>2</sup> | ISO 179/1eA       |
| Charpy notched impact strength (-30°C)       | 8 / 8        | kJ/m <sup>2</sup> | ISO 179/1eA       |
| <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) | 0.4 / *      | E-4/°C            | ISO 11359-1/-2    |
| Coeff. of linear therm. expansion (normal)   | 0.6 / *      | 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                             | 0.67 / *     | mm                | IEC 60695-11-10   |
| UL recognition                               | Yes / *      | -                 | -                 |
| Relative Temperature Index – electrical      | 130          | °C                | UL746B            |

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| Properties                            | Typical Data | Unit              | Test Method    |
|---------------------------------------|--------------|-------------------|----------------|
| RTI electrical (Thickness (1) tested) | 0.67         | mm                | UL746B         |
| <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            | 200 / -      | V                 | IEC 60112      |
| Relative permittivity (100Hz)         | 4.3 / -      | -                 | IEC 60250      |
| Relative permittivity (1 MHz)         | 4 / -        | -                 | IEC 60250      |
| <b>Other properties</b>               |              |                   |                |
|                                       | dry / cond   |                   |                |
| Humidity absorption                   | 1.7 / *      | %                 | Sim. to ISO 62 |
| Density                               | 1600 / -     | kg/m <sup>3</sup> | ISO 1183       |