

## Stanyl® TS200F6

## PA46-GF30

30% Glass Reinforced

Print Date: 2019-10-16

| Properties                    | Typical Data | Unit | Test Method       |
|-------------------------------|--------------|------|-------------------|
| <b>Rheological properties</b> |              |      |                   |
|                               | dry / cond   |      |                   |
| Molding shrinkage [parallel]  | 0.5 / *      | %    | Sim. to ISO 294-4 |
| Molding shrinkage [normal]    | 1.3 / *      | %    | Sim. to ISO 294-4 |
| <b>Mechanical properties</b>  |              |      |                   |
|                               | dry / cond   |      |                   |
| Tensile modulus               | 10000 / 6000 | MPa  | ISO 527-1/-2      |
| Tensile modulus (120°C)       | 5500 / -     | MPa  | ISO 527-1/-2      |
| Tensile modulus (160°C)       | 5000         | MPa  | ISO 527-1/-2      |
| Tensile modulus (180°C)       | 4400         | MPa  | ISO 527-1/-2      |
| Tensile modulus (200°C)       | 4000         | MPa  | ISO 527-1/-2      |
| Stress at break               | 210 / 115    | MPa  | ISO 527-1/-2      |
| Stress at break (120°C)       | 110 / -      | 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               | 4 / 7        | %    | ISO 527-1/-2      |
| Strain at break (120°C)       | 7.5 / -      | %    | ISO 527-1/-2      |
| Strain at break (160°C)       | 7.5          | %    | ISO 527-1/-2      |
| Strain at break (180°C)       | 7.5          | %    | ISO 527-1/-2      |
| Strain at break (200°C)       | 7.5          | %    | ISO 527-1/-2      |
| Flexural modulus              | 9000 / 5500  | MPa  | ISO 178           |
| Flexural modulus (120°C)      | 4700         | MPa  | ISO 178           |
| Flexural modulus (160°C)      | 3900         | MPa  | ISO 178           |
| Flexural strength             | 300 / 180    | MPa  | ISO 178           |

| Properties                             | Typical Data | Unit              | Test Method |
|----------------------------------------|--------------|-------------------|-------------|
| Flexural strength (120°C)              | 160          | MPa               | ISO 178     |
| Flexural strength (160°C)              | 130          | MPa               | ISO 178     |
| Charpy impact strength (+23°C)         | 80 / 100     | kJ/m <sup>2</sup> | ISO 179/1eU |
| Charpy impact strength (-30°C)         | 65 / 75      | kJ/m <sup>2</sup> | ISO 179/1eU |
| Charpy notched impact strength (+23°C) | 12 / 21      | kJ/m <sup>2</sup> | ISO 179/1eA |
| Charpy notched impact strength (-30°C) | 11 / 11      | kJ/m <sup>2</sup> | ISO 179/1eA |
| Izod notched impact strength (+23°C)   | 12 / 21      | kJ/m <sup>2</sup> | ISO 180/1A  |
| Izod notched impact strength (-40°C)   | 11 / 11      | kJ/m <sup>2</sup> | ISO 180/1A  |

## 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 | 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.        | HB / *   | class  | IEC 60695-11-10        |
| Thickness tested                             | 1.5 / *  | mm     | IEC 60695-11-10        |
| UL recognition                               | Yes / *  | -      | -                      |
| Burning Behav. at thickness h                | HB / *   | class  | IEC 60695-11-10        |
| Thickness tested                             | 0.83 / * | mm     | IEC 60695-11-10        |
| UL recognition                               | Yes / *  | -      | -                      |
| Relative Temperature Index - electrical      | 65       | °C     | UL746B                 |
| RTI electrical (Thickness (1) tested)        | 0.83     | mm     | UL746B                 |
| Thermal Index 5000 hrs                       | 152      | °C     | IEC 60216/ISO 527-1/-2 |

## Electrical properties

dry / cond

|                               |            |       |             |
|-------------------------------|------------|-------|-------------|
| Volume resistivity            | 1E13 / 1E9 | Ohm*m | IEC 60093   |
| Electric strength             | 35 / 25    | kV/mm | IEC 60243-1 |
| Comparative tracking index    | 500 / -    | V     | IEC 60112   |
| Relative permittivity (100Hz) | 4.4 / 12   | -     | IEC 60250   |

## Property Data

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|-------------------------------|--------------|-------------------|----------------|
| Relative permittivity (1 MHz) | 4 / 4.6      | -                 | IEC 60250      |
| Other properties              | dry / cond   |                   |                |
| Humidity absorption           | 2.6 / *      | %                 | Sim. to ISO 62 |
| Density                       | 1410 / -     | kg/m <sup>3</sup> | ISO 1183       |