

## Material data sheet PA 12 – SCHUNK Laserforming

### Information:

- maximum part measure 300mm x 300mm x 330mm
  - accuracy: +/- 0,1mm
  - fits cannot be produced
  - Layer-thickness 0,10 mm
  - Range of application -40°C bis +80°C
  - Designations:
    - PA2200
    - PA2201 → FDA-approval
- } identical mechanical properties

| Mechanical properties                              | Quantity | Unit              | Test standard  |
|----------------------------------------------------|----------|-------------------|----------------|
| Izod notched bar impact test (23°C)                | 4,4±0,4  | kJ/m <sup>2</sup> | ISO 180/1A     |
| Izod impact strength (23°C)                        | 32,8±3,4 | kJ/m <sup>2</sup> | ISO 180/1U     |
| Shore-hardness D (15s)                             | 75±2     | -                 | ISO 868        |
| Ball-impression-hardness                           | 77,6±2   | N/mm <sup>2</sup> | ISO 2039-1     |
| Tensile modulus (X-direction)                      | 1700±150 | N/mm <sup>2</sup> | ISO 527-1/-2   |
| Tensile modulus (Y-direction)                      | 1700     | N/mm <sup>2</sup> | ISO 527-1/-2   |
| Tensile strength (X-direction)                     | 45±3     | N/mm <sup>2</sup> | ISO 527-1/-2   |
| Tensile strength (Y-direction)                     | 45±3     | N/mm <sup>2</sup> | ISO 527-1/-2   |
| Elongation at break (X-direction) 15%              | 15       | %                 | ISO 527-1/-2   |
| Charpy- impact strength (23°C, X-direction)        | 53±3,8   | kJ/m <sup>2</sup> | ISO 179/1eU    |
| Charpy-notched bar impact test (23°C, X-direction) | 4,8±0,3  | kJ/m <sup>2</sup> | ISO 179/1eA    |
| Flexural modulus (23°C, X-direction)               | 1240±130 | N/mm <sup>2</sup> | ISO 178        |
| Flexural strength (X-direction)                    | 58       | N/mm <sup>2</sup> | ISO 178        |
| Thermal properties                                 | Quantity | Unit              | Test standard  |
| Melting-temperature (20°C/min)                     | 176      | °C                | ISO 11357-1/-3 |
| Additional properties                              | Quantity | Unit              | Test standard  |
| Density (laser sintered)                           | 900-950  | kg/m <sup>3</sup> | -              |
| Powder-colour (safety-data sheet)                  | white    | -                 | -              |