

## Technický datový list

## Sustamid® 6 modrý

PA 6

## Vlastnosti produktu

- Good toughness
- Good noise absorption properties
- Vibration damping
- High absorption of moisture of up to 3 % in standard atmosphere
- High abrasion resistance
- High mechanical strength
- Good impact strength
- good adhesive properties
- Good weldability
- Good machinability
- Good sliding properties

## Typické oblasti použití

- Stavba strojů a zařízení
- Letectví a kosmonautika
- Potravinářský průmysl
- Zpracování masa, ryb a drůbeže
- Pečivo a sladkosti

|                                  | Testovací metoda  | Jednotka            | Orientační hodnota |
|----------------------------------|-------------------|---------------------|--------------------|
| <b>Obecné vlastnosti</b>         |                   |                     |                    |
| Hustota                          | DIN EN ISO 1183-1 | g / cm <sup>3</sup> | 1,14               |
| Absorpce vody                    | DIN EN ISO 62     | %                   | 3,0                |
| Hořlavost (tloušťka 3 mm / 6 mm) | UL 94             |                     | HB / HB            |
| <b>Mechanické vlastnosti</b>     |                   |                     |                    |
| Mez kluzu                        | DIN EN ISO 527    | MPa                 | 80                 |
| Prodloužení při přetržení        | DIN EN ISO 527    | %                   | 50                 |
| Modul pružnosti v tahu           | DIN EN ISO 527    | MPa                 | 3200               |
| Vrubová houževnatost             | DIN EN ISO 179    | kJ / m <sup>2</sup> | 3                  |
| Tvrdost Shore                    | DIN EN ISO 868    | scale D             | 82                 |
| <b>Tepelné vlastnosti</b>        |                   |                     |                    |
| Teplota tání                     | ISO 11357-3       | °C                  | 220                |
| Tepelná vodivost                 | DIN 52612-1       | W / (m * K)         | 0,23               |

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|                                          | Testovací metoda            | Jednotka             | Orientační hodnota |
|------------------------------------------|-----------------------------|----------------------|--------------------|
| Tepelná kapacita                         | DIN 52612                   | kJ / (kg * K)        | 1,70               |
| Koeficient lineární teplotní roztažnosti | DIN 53752                   | 10 <sup>-6</sup> / K | 90                 |
| Provozní teplota dlouhodobá              | Průměr                      | °C                   | -40 ... 85         |
| Provozní teplota krátkodobá (max.)       | Průměr                      | °C                   | 160                |
| Teplota tepelné deformace                | DIN EN ISO 75, Verf. A, HDT | °C                   | 75                 |
| <b>Elektrické vlastnosti</b>             |                             |                      |                    |
| Relativní permitivita                    | IEC 60250                   |                      | 3,9                |
| Dielektrický disipační faktor (50 Hz)    | IEC 60250                   |                      | 0,02               |
| Objemový odpor                           | DIN EN 62631-3-1            | Ω * cm               | 10 <sup>15</sup>   |
| Povrchový odpor                          | DIN EN 62631-3-2            | Ω                    | 10 <sup>13</sup>   |
| Srovnávací sledovací index               | IEC 60112                   |                      | 600                |
| Dielektrická pevnost                     | IEC 60243                   | kV / mm              | 20                 |

The following applies to Polyamides: Under the influence of moisture absorption, the mechanical properties change. The material becomes tougher and more resistant to impact, the modulus of elasticity declines. Depending on the environmental atmosphere, the temperature and the period of moisture absorption, only the surface layer is affected by alterations of property to a certain depth. On thick-walled parts, the center area remains unaffected. The short-term maximum application temperature only applies to very low mechanical stress for a few hours. The long-term maximum application temperature is based on the thermal ageing of plastics by oxidation, resulting in a decrease of the mechanical properties. This applies to an exposure to temperatures for at least 5.000 hours causing a 50% loss of the tensile strength from the original value (measured at room temperature). This value says nothing about the mechanical strength of the material at high application temperatures. In case of thick-walled parts, only the surface layer is affected by oxidation from high temperatures. With the addition of antioxidants, a better protection of the surface layer is achieved. In any case, the center area of the material remains unaffected. The minimum application temperature is basically influenced by possible stress factors like impact and/or shock under application. The values stated refer to a minimum degree of impact stress. The data stated above are average values ascertained by statistical tests on a regular basis. They are in accordance with DIN EN 15860. They serve as information about our products and are presented as a guide to choose from our range of materials. This, however, does not include an assurance of specific properties or the suitability for particular application purposes that are legally binding. Since the properties also depend on the dimension of the semi-finished products and the degree of crystallization (e.g. nucleating by pigments), the actual values of the properties of a particular product may differ from the indicated values.