

# PA 6 GLASS | POLYAMIDES

## MAIN FEATURES

Compared to PA6, 30% glass fiber reinforcement improves mechanical properties such as tensile strength hardness and rigidity, increases thermal dimensional stability and chemical agents, and limits water absorption.

## Applications

Slider pads  
Guides  
Pulleys  
Profiles  
Wheels  
Rollers

## Application sectors

Mechanical  
Medical & Pharmaceutical  
Aerospace  
Food  
Automotive

## FDA Compatibility

Yes

## Available colours



| PROPERTIES                                                         | REGULATIONS | UM                 | PA6 VETRO          |
|--------------------------------------------------------------------|-------------|--------------------|--------------------|
| PHYSICAL PROPERTIES                                                |             |                    |                    |
| Density                                                            | DIN53479    | g/cm <sup>3</sup>  | 1.36               |
| Water absorption (50% at 23° C)                                    | **DIN53495  | %                  | 2,1                |
| Maximum temp. for use in the air for short duration                |             | °C                 | 180                |
| Maximum temperature of use in continuous air                       |             | °C                 | 100                |
| Minimum temperature of use in continuous air                       |             | °C                 | -30                |
| MECHANICAL PROPERTIES                                              |             |                    |                    |
| Yield stress/tensile strength ( $\sigma_s$ )                       | ISO527      | N/mm <sup>2</sup>  | 98                 |
| Elongation at break ( $\epsilon_s$ )                               | ISO527      | %                  | 4                  |
| Breaking load ( $\sigma_r$ )                                       | DIN53455    | N/mm <sup>2</sup>  | -                  |
| Elongation at break ( $\epsilon_r$ )                               | ISO527      | %                  | 5                  |
| Impact resistance                                                  | *DIN53453   | kJ/m <sup>2</sup>  | NR                 |
| Impact resistance, notched test                                    | *DIN53453   | kJ/m <sup>2</sup>  | 4                  |
| Rockwell hardness                                                  | DIN53465    | Scala M            | M98                |
| Compression test, load 1% deform. nominal                          | ISO604      | N/mm <sup>2</sup>  | 21                 |
| Elasticity module                                                  | ISO527      | N/mm <sup>2</sup>  | 4.500              |
| THERMIC PROPERTIES                                                 |             |                    |                    |
| Melting temperature                                                | -           | °C                 | 220                |
| VICAT softening temperature                                        | DIN53460    | °C                 | -                  |
| Deformation temperature under bending load                         | DIN53461    | °C                 | 140                |
| Coefficient of linear thermal expansion ( $\alpha$ )               | DIN53752    | KX10 <sup>-6</sup> | 60                 |
| Thermal conductivity at 23°                                        | DIN52612    | W/(Kxm)            | 0,30               |
| ELECTRICAL PROPERTIES                                              |             |                    |                    |
| Volume resistivity                                                 | **DIN53482  | $\Omega$ /cm       | 1x10 <sup>14</sup> |
| Surface resistivity                                                | **DIN53482  | $\Omega$           | 1x10 <sup>14</sup> |
| Dielectric constant at 10 <sup>3</sup> HZ (on thickness of 1 mm.)  | **DIN53483  | -                  | -                  |
| Dielectric dissipation factor (tan $\delta$ ) a 10 <sup>3</sup> HZ | **DIN53483  | -                  | -                  |
| Dielectric strength (on thickness of 1 mm.)                        | **DIN53481  | kV/mm              | 20                 |
| Electrical leakage resistivity                                     | 112/030TI   | -                  | CTI475             |
| OTHER PROPERTIES                                                   |             |                    |                    |
| Possibility of gluing                                              | -           | -                  | No                 |
| Absence of physiological risks                                     | FDA         | -                  | No                 |
| Dry friction coefficient on steel                                  | DIN53375    | -                  | -                  |
| Flammability                                                       | UL94        | -                  | HB                 |
| UV stability                                                       | -           | -                  | -                  |

\* : MEASUREMENTS ON TEST TUBES IN ANHYDROUS STATE

\*\* : MEASUREMENTS ON EQUILIBRIUM TUBES WITH U.R. 50% AT A TEMPERATURE OF 23° C

(3): ON CYLINDERS Ø 12X30 MM

(5): TRACTION SPEED 1 MM / MIN

(4): TRACTION SPEED 5 MM/MIN

(6): TRACTION SPEED 20 MM/MIN