

**Polyamide 46**

with glass fibers, PTFE, lubricant modified, natural color (black)

| Physical properties                    |                           | Test method   | Specimen        | Units | Typical value     |
|----------------------------------------|---------------------------|---------------|-----------------|-------|-------------------|
| Specific gravity                       |                           | ISO 1183-3    |                 | g/cm³ | 1,55              |
| Water absorption                       | 23°C / 24h                | ISO 62        | MPTS ISO 3167 A | %     | 1,5               |
| Linear mould shrinkage                 |                           | DIN 16742     | MPTS ISO 3167 A | %     | 0,2-0,5           |
| Mechanical properties at 23°C / 50% rh |                           |               |                 |       |                   |
| Tensile strength                       | dry, @50 mm/min           | ISO 527       | MPTS ISO 3167 A | MPa   | 180               |
| Elongation at maximum force            | dry, @50 mm/min           | ISO 527       | MPTS ISO 3167 A | %     | 2,3               |
| Modulus of elasticity                  | dry, @1 mm/min            | ISO 527       | MPTS ISO 3167 A | GPa   | 11                |
| Flexural strength                      | dry, @10 mm/min           | ISO 178       | MPTS ISO 3167 A | MPa   | 255               |
| Flexural elongation at max. force      | dry, @10 mm/min           | ISO 178       | MPTS ISO 3167 A | %     | 2,7               |
| Flexural modulus                       | dry, @2 mm/min            | ISO 178       | MPTS ISO 3167 A | GPa   | 9                 |
| Charpy impact strength                 | dry                       | ISO 179 1eU   | 80x10x4mm       | kJ/m² | 55                |
| Charpy impact strength                 | dry                       |               | 80x10x4mm       | kJ/m² | 55                |
| Thermal properties                     |                           |               |                 |       |                   |
| Heat distortion temperature            | HDT A                     | ISO 75        | molded sample   | °C    | 285               |
| Continuous service temperature         | 20.000 h                  | IEC 60216     | MPTS ISO 3167 A | °C    | 150               |
| Service temperature                    | during lifetime max. 200h |               | MPTS ISO 3167 A | °C    | 240               |
| Electrical properties                  |                           |               |                 |       |                   |
| Insulation resistance strip electrode  | R25                       | DIN IEC 60167 | MPTS ISO 3167 A | Ω     | >10 <sup>10</sup> |
| Surface resistance                     | ROB                       | DIN IEC 60093 | Ronde 60x4mm    | Ω     | >10 <sup>10</sup> |

**Main features**

TRIBOLOGICAL

Strong, stiff parts. Improved friction and wear behaviour. Optimised for dry running operations.

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**Recommended processing parameters****Predrying**

It is advisable to predry the granulate with a suitable dryer immediately before processing. The granulate may absorb moisture from the environment.

| Dryer type          | Temperature °C | Drying time in h |
|---------------------|----------------|------------------|
| Dehumidifying dryer | 80             | 2 - 8            |
| Vacuum Dryer        | 80             | 2 - 12           |

**Processing**

|                  |    |           |
|------------------|----|-----------|
| Zone 1           | °C | 285 - 315 |
| Zone 2           | °C | 305 - 315 |
| Zone 3           | °C | 305 - 315 |
| Nozzle           | °C | 280 - 330 |
| Mold             | °C | 90 - 130  |
| Melt temperature | °C | 310       |

In general this product can be processed on conventional injection moulding machines while observing the usual technical guidelines. Any added fibrous materials or fillers may have an abrasive effect. In this case the cylinder and screw should be protected against wear as is usual in the processing of reinforced thermoplastic materials. Lengthy dwell times for the melts in the cylinder should be avoided. Lower the temperatures during interruptions!

**Delivery form & storage**

Unless indicated otherwise, the material is delivered as 3mm long pellets in sealed bags on pallets. Preferably storage should be effected in dry and normally temperatured rooms.

**Additional information**

During processing the moisture level should not exceed 0.05%, otherwise molecular degradation and surface defects (e.g. smearing) may occur. Excessively high predrying temperatures may cause discoloration. The processing notes provided merely represent a recommendation for general use. Due to the large variety of machines, geometries and volumes of parts, etc., it may be necessary to employ different settings according to the specific application. Please contact us for further information.

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