

TECHNICAL DATA SHEET

TECHNYL SHAPE C 442 BK V
TECHNYL C 442 BLACK V



TECHNYL SHAPE C 442 BK V is an unreinforced polyamide 6, impact modified, high viscosity, for extrusion. This grade offers high flexibility and very high impact resistance even at low temperature.

General

| | | | |
|-----------------------|--|-----------------------|--|
| Polymer type | PA6 | | |
| Certifications | RoHS | EC 1907/2006 (REACH) | |
| Feature | high viscosity | impact modified | |
| Applications | automotive applications industrial applications | consumer applications | |
| Colors available | black | | |
| Forms | pellets | | |
| Processing technology | extrusion | | |

Product identification

| | |
|-----------------------|----------------|
| ISO 1043 abbreviation | PA6 |
| ISO 16396 designation | PA6,MP,S27-030 |

| Condition | Standard | Unit | Value |
|-----------|----------|------|-------|
|-----------|----------|------|-------|

Physical properties

| | Condition | Standard | Unit | Value |
|-----------------------------|-------------|-----------------|-------------------|-------|
| Density | | ISO 1183 | g/cm ³ | 1.07 |
| Water absorption | 24 hr, 23°C | ISO 62 | % | 1.2 |
| Molding shrinkage, parallel | | ISO 294-4, 2577 | % | 2.0 |
| Molding shrinkage, normal | | ISO 294-4, 2577 | % | 1.6 |

| | Condition | Standard | Unit | Value |
|-------------------------------------|-----------|--------------|-------------------|---------------------|
| Mechanical properties | | | | dam / cond.* |
| Tensile modulus | 1 mm/min | ISO 527-1/-2 | MPa | 650 / 325 |
| Stress at break | | ISO 527-1/-2 | MPa | 40 / 20 |
| Strain at break | | ISO 527-1/-2 | % | 300 / 300 |
| Flexural modulus, ISO 178 | 2 mm/min | ISO 178 | MPa | 650 / 325 |
| Flexural strength, ISO 178 | 2 mm/min | ISO 178 | MPa | 25 / 12 |
| Izod notched impact strength, +23°C | +23°C | ISO 180/1A | kJ/m ² | 85 / - |

*: **conditioned according to ISO 1110**

| | Condition | Standard | Unit | Value |
|--|-----------|-------------|------|-------|
| Thermal properties | | | | |
| Melting temperature, 10°C/min | | ISO 11357-1 | °C | 222 |
| Temp. of deflection under load, 1.80 MPa | 1.80 MPa | ISO 75 | °C | 50 |

| | Condition | Standard | Unit | Value |
|-------------------------------------|-----------|-----------|------|-------------|
| Burning behaviour | | | | |
| Burning rate, FMVSS, Thickness 1 mm | | FMVSS 302 | | <100 mm/min |

| | Condition | Standard | Unit | Value |
|------------------------------|-----------|---------------|-------|--------|
| Electrical properties | | | | |
| Volume resistivity | | IEC 62631-3-1 | ohm.m | 1.0E13 |
| Surface resistivity | | IEC 62631-3-1 | ohm | 1.0E14 |

| | |
|-------------------------------------|--|
| Processing conditions | |
| Drying temperature/time | 8H at 80°C with dry air, dew point -35°C |
| Suggested max moisture | 0.08 % |
| Feed zone temperature for extrusion | 220 - 230 °C |
| Compression zone temperature for | 225 - 240 °C |

Processing conditions

| | |
|--------------------------------------|--------------|
| extrusion | |
| Front zone temperature for extrusion | 230 - 245 °C |
| Die zone temperature for extrusion | 230 - 240 °C |
| Recommended extrusion temperature | 220 - 245 °C |