

TECHNICAL DATA SHEET

TECHNYL 4EARTH A3E 216M BK

General

|                       |                              |
|-----------------------|------------------------------|
| Feature               | Impact modified              |
| Polymer type          | PA66 (Polyamide 66)          |
| Processing technology | Injection molding            |
| Certification         | RoHS<br>EC 1907/2006 (REACH) |
| Applications          | Automotive Applications      |
| Colors available      | Black                        |
| Forms                 | Pellets                      |

Product identification

|                       |                          |
|-----------------------|--------------------------|
| ISO 1043 abbreviation | PA66-I                   |
| ISO 16396 designation | PA66-I,(R>50),M1,S14-030 |

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

Physical properties

|                                    |            |                 |            |           |
|------------------------------------|------------|-----------------|------------|-----------|
| Density                            |            | ISO 1183        | g/cm³      | 1.11      |
| Molding shrinkage, parallel        |            | ISO 294-4, 2577 | %          | 1.4 - 1.6 |
| Molding shrinkage, normal          |            | ISO 294-4, 2577 | %          | 1.5 - 1.7 |
| Melt volume-flow rate, MVR, 5.0 kg | 275°C, 5kg | ISO 1133        | cm³/10 min | 85 - 105  |
| Melt flow rate, MFR                |            | ISO 1133        | g/10 min   | 100       |

Mechanical properties

|                                       |          |              |       | dam / cond.* |
|---------------------------------------|----------|--------------|-------|--------------|
| Tensile modulus                       | 1 mm/min | ISO 527-1/-2 | MPa   | 2100 / 750   |
| Stress at break                       |          | ISO 527-1/-2 | MPa   | 50 / 30      |
| Strain at break                       |          | ISO 527-1/-2 | %     | 9 / 45       |
| Yield stress                          |          | ISO 527-1/-2 | MPa   | - / 35       |
| Yield strain                          |          | ISO 527-1/-2 | %     | 5 / 35       |
| Flexural modulus, ISO 178             | 2 mm/min | ISO 178      | MPa   | 1800 / 650   |
| Flexural strength, ISO 178            | 2 mm/min | ISO 178      | MPa   | 75 / 45      |
| Charpy impact strength, +23°C         | +23°C    | ISO 179/1eU  | kJ/m² | 30 / 100     |
| Charpy notched impact strength, +23°C | +23°C    | ISO 179/1eA  | kJ/m² | 3 / 6        |

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Condition

Standard

Unit

Value

Thermal properties

|                                          |          |             |    |     |
|------------------------------------------|----------|-------------|----|-----|
| Melting temperature, 10°C/min            |          | ISO 11357-1 | °C | 261 |
| Temp. of deflection under load, 0.45 MPa | 0.45 MPa | ISO 75      | °C | 189 |
| Temp. of deflection under load, 1.80 MPa | 1.80 MPa | ISO 75      | °C | 70  |

Burning behaviour

|                                     |  |           |  |      |
|-------------------------------------|--|-----------|--|------|
| Burning rate, FMVSS, Thickness 1 mm |  | FMVSS 302 |  | <100 |
|-------------------------------------|--|-----------|--|------|

Test run at 23°C if not differently specified, DAM state (dry as moulded), valid for black products.  
\*: conditioned according to ISO 1110

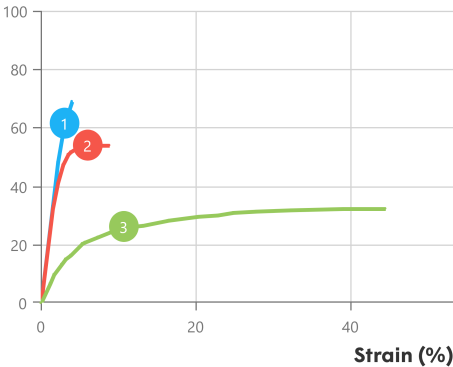
Processing conditions

|                               |              |
|-------------------------------|--------------|
| Drying temperature/time       | 80           |
| Suggested max moisture        | 0.2 %        |
| Rear temperature              | 270 - 280 °C |
| Middle temperature            | 275 - 285 °C |
| Front temperature             | 280 - 290 °C |
| Recommended mould temperature | 70 - 100 °C  |

These parameters are typical of the product but should be related to the type of machinery used and to the type of moulded part.

Stress-strain, dry

Stress (MPa)

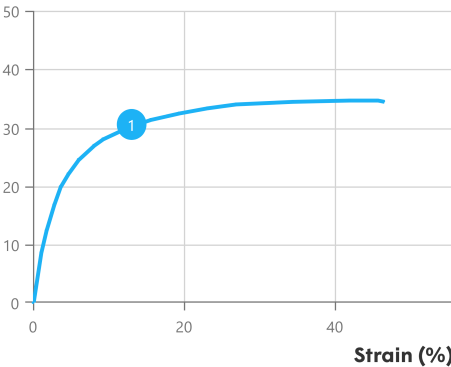


Temperature (°C)

|   |            |
|---|------------|
| 1 | Spannung 1 |
| 2 | Spannung 2 |
| 3 | Spannung 3 |

Stress-strain, conditioned

Stress (MPa)



Temperature (°C)

|   |            |
|---|------------|
| 1 | Spannung 1 |
|---|------------|

## Disclaimer

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