

**Ultramid® A4K**  
**PA66**

BASF

| Rheological properties     | dry / cond | Unit      | Test Standard |
|----------------------------|------------|-----------|---------------|
| <b>ISO Data</b>            |            |           |               |
| Melt volume-flow rate, MVR | 40 / *     | cm³/10min | ISO 1133      |
| Temperature                | 275 / *    | °C        | -             |
| Load                       | 5 / *      | kg        | -             |

| Mechanical Properties                   | dry / cond          | Unit  | Test Standard |
|-----------------------------------------|---------------------|-------|---------------|
| <b>ISO Data</b>                         |                     |       |               |
| Tensile Modulus                         | 3200 / 1200         | MPa   | ISO 527       |
| Yield stress                            | 85 / 50             | MPa   | ISO 527       |
| Yield strain                            | 4.2 / 20            | %     | ISO 527       |
| Nominal strain at break                 | >50 / >50           | %     | ISO 527       |
| Tensile Creep Modulus, 1000h            | * / 700             | MPa   | ISO 899-1     |
| Impact Strength (Charpy), +23°C         | no break / no break | kJ/m² | ISO 179/1eU   |
| Notched Impact Strength (Charpy), +23°C | 5.7 / 27            | kJ/m² | ISO 179/1eA   |
| Notched Impact Strength (Charpy), -30°C | 5 / -               | kJ/m² | ISO 179/1eA   |
| Notched Impact Strength (Izod), 23°C    | 6 / no break        | kJ/m² | ISO 180/1A    |
| Notched Impact Strength (Izod)          | 7 / 7               | kJ/m² | ISO 180/1A    |
| Temperature                             | -30                 | °C    | -             |

| Thermal Properties                          | dry / cond | Unit  | Test Standard  |
|---------------------------------------------|------------|-------|----------------|
| <b>ISO Data</b>                             |            |       |                |
| Melting Temperature (10°C/min)              | 260 / *    | °C    | ISO 11357-1/-3 |
| Temp. of deflection under load (1.80 MPa)   | 75 / *     | °C    | ISO 75-1/-2    |
| Temp. of deflection under load (0.45 MPa)   | 220 / *    | °C    | ISO 75-1/-2    |
| Coeff. of Linear Therm. Expansion, parallel | 85 / *     | E-6/K | ISO 11359-1/-2 |
| Burning Behav. at 1.5 mm Nom. Thickn.       | V-2 / *    | class | UL 94          |
| Thickness tested                            | 1.6 / *    | mm    | -              |

| Electrical Properties       | dry / cond  | Unit  | Test Standard |
|-----------------------------|-------------|-------|---------------|
| <b>ISO Data</b>             |             |       |               |
| Relative permittivity, 1MHz | 3.2 / 5     | -     | IEC 62631-2-1 |
| Dissipation Factor, 1MHz    | 260 / 2000  | E-4   | IEC 62631-2-1 |
| Volume Resistivity          | 1E13 / 1E10 | Ohm*m | IEC 62631-3-1 |
| Surface Resistivity         | * / 1E10    | Ohm   | IEC 62631-3-2 |
| Comparative tracking index  | 600 / -     | -     | IEC 60112     |

| Other Properties    | dry / cond | Unit  | Test Standard  |
|---------------------|------------|-------|----------------|
| <b>ISO Data</b>     |            |       |                |
| Water Absorption    | 9 / *      | %     | Sim. to ISO 62 |
| Humidity absorption | 3.1 / *    | %     | Sim. to ISO 62 |
| Density             | 1130 / -   | kg/m³ | ISO 1183       |
| Bulk density        | 700        | kg/m³ | -              |

| Material Specific Properties | dry / cond | Unit  | Test Standard       |
|------------------------------|------------|-------|---------------------|
| <b>ISO Data</b>              |            |       |                     |
| Viscosity number             | 190 / *    | cm³/g | ISO 307, 1157, 1628 |

| Processing Recommendation Injection Molding | Value     | Unit | Test Standard |
|---------------------------------------------|-----------|------|---------------|
| Melt temperature                            | 280 - 300 | °C   | -             |
| Mold temperature                            | 60 - 80   | °C   | -             |

**Characteristics**

**Processing**

Injection Molding

**Features**

Tribologic Grade

**Delivery form**

Pellets

**Applications**

Automotive