



## Makroblend® KU2-7912/4

(PC+PBT)-I

Covestro Deutschland AG

(PC PBT)-blend, impact modified, Injection molding grade, high toughness at low temperatures, ideal for painted applications, unreinforced, applications: automotive body panels

| Rheological properties     | Value | Unit                   | Test Standard |
|----------------------------|-------|------------------------|---------------|
| <b>ISO Data</b>            |       |                        |               |
| Melt volume-flow rate, MVR | 16    | cm <sup>3</sup> /10min | ISO 1133      |
| Temperature                | 260   | °C                     | -             |
| Load                       | 5     | kg                     | -             |

| Mechanical Properties                   | Value    | Unit              | Test Standard |
|-----------------------------------------|----------|-------------------|---------------|
| <b>ISO Data</b>                         |          |                   |               |
| Tensile Modulus                         | 2050     | MPa               | ISO 527       |
| Yield stress                            | 50       | MPa               | ISO 527       |
| Yield strain                            | 4        | %                 | ISO 527       |
| Nominal strain at break                 | >50      | %                 | ISO 527       |
| Impact Strength (Charpy), +23°C         | no break | kJ/m <sup>2</sup> | ISO 179/1eU   |
| Impact Strength (Charpy), -30°C         | no break | kJ/m <sup>2</sup> | ISO 179/1eU   |
| Notched Impact Strength (Charpy), +23°C | 60       | kJ/m <sup>2</sup> | ISO 179/1eA   |
| Notched Impact Strength (Charpy), -30°C | 45       | kJ/m <sup>2</sup> | ISO 179/1eA   |

| Thermal Properties                          | Value | Unit  | Test Standard  |
|---------------------------------------------|-------|-------|----------------|
| <b>ISO Data</b>                             |       |       |                |
| Melting Temperature (10°C/min)              | 223   | °C    | ISO 11357-1/-3 |
| Temp. of deflection under load (1.80 MPa)   | 82    | °C    | ISO 75-1/-2    |
| Temp. of deflection under load (0.45 MPa)   | 106   | °C    | ISO 75-1/-2    |
| Coeff. of Linear Therm. Expansion, parallel | 90    | E-6/K | ISO 11359-1/-2 |
| Coeff. of Linear Therm. Expansion, normal   | 90    | E-6/K | ISO 11359-1/-2 |
| Burning Behav. at 1.5 mm Nom. Thickn.       | HB    | class | UL 94          |
| Thickness tested                            | 1.6   | mm    | -              |
| Oxygen index                                | 21    | %     | ISO 4589-1/-2  |

| Electrical Properties        | Value | Unit  | Test Standard |
|------------------------------|-------|-------|---------------|
| <b>ISO Data</b>              |       |       |               |
| Relative permittivity, 100Hz | 3.2   | -     | IEC 62631-2-1 |
| Relative permittivity, 1MHz  | 3.1   | -     | IEC 62631-2-1 |
| Dissipation Factor, 100Hz    | 15    | E-4   | IEC 62631-2-1 |
| Dissipation Factor, 1MHz     | 130   | E-4   | IEC 62631-2-1 |
| Volume Resistivity           | >1E13 | Ohm*m | IEC 62631-3-1 |
| Surface Resistivity          | >1E15 | Ohm   | IEC 62631-3-2 |
| Electric Strength            | 35    | kV/mm | IEC 60243-1   |
| Comparative tracking index   | 500   | -     | IEC 60112     |

| Other Properties    | Value | Unit              | Test Standard  |
|---------------------|-------|-------------------|----------------|
| <b>ISO Data</b>     |       |                   |                |
| Water Absorption    | 0.6   | %                 | Sim. to ISO 62 |
| Humidity absorption | 0.2   | %                 | Sim. to ISO 62 |
| Density             | 1200  | kg/m <sup>3</sup> | ISO 1183       |

| Test specimen production              | Value | Unit | Test Standard |
|---------------------------------------|-------|------|---------------|
| <b>ISO Data</b>                       |       |      |               |
| Injection Molding, melt temperature   | 260   | °C   | ISO 294       |
| Injection Molding, mold temperature   | 70    | °C   | ISO 294       |
| Injection Molding, injection velocity | 200   | mm/s | ISO 294       |

| Processing Recommendation Injection Molding | Value     | Unit | Test Standard |
|---------------------------------------------|-----------|------|---------------|
| Pre-drying - Temperature                    | 100 - 105 | °C   | -             |
| Pre-drying - Time                           | 2 - 4     | h    | -             |
| Processing humidity                         | ≤0.01     | %    | -             |
| Melt temperature                            | 250 - 270 | °C   | -             |
| Mold temperature                            | 60 - 80   | °C   | -             |

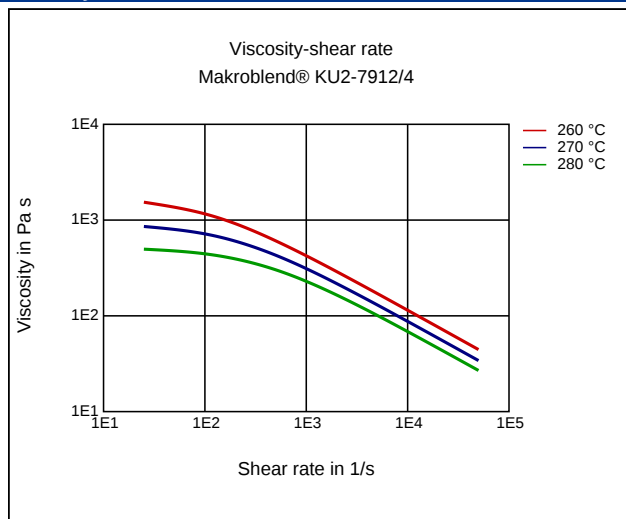
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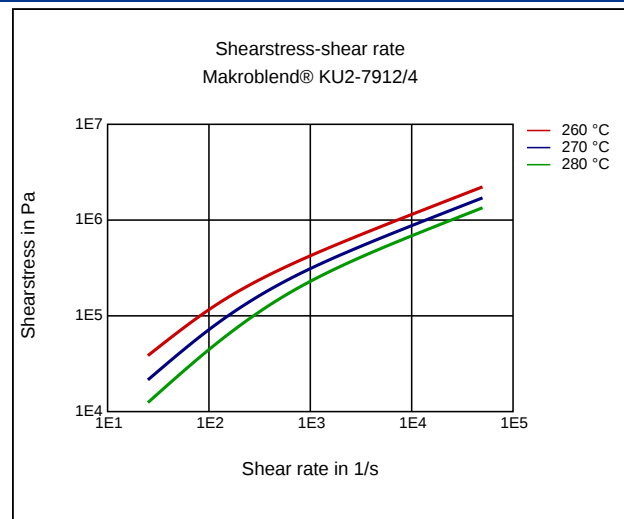
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### Diagrams

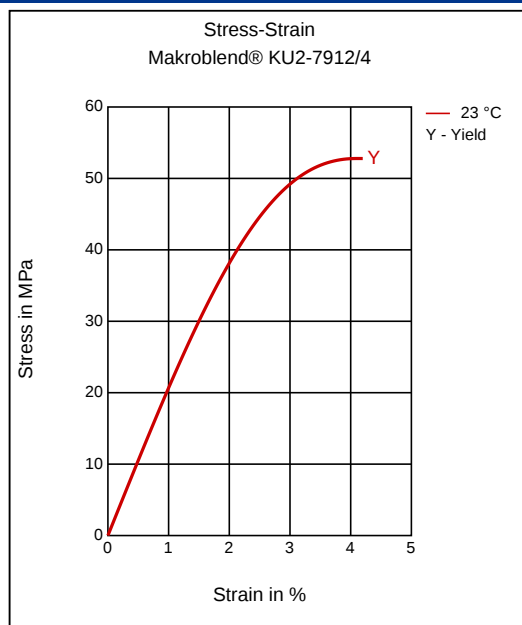
#### Viscosity-shear rate



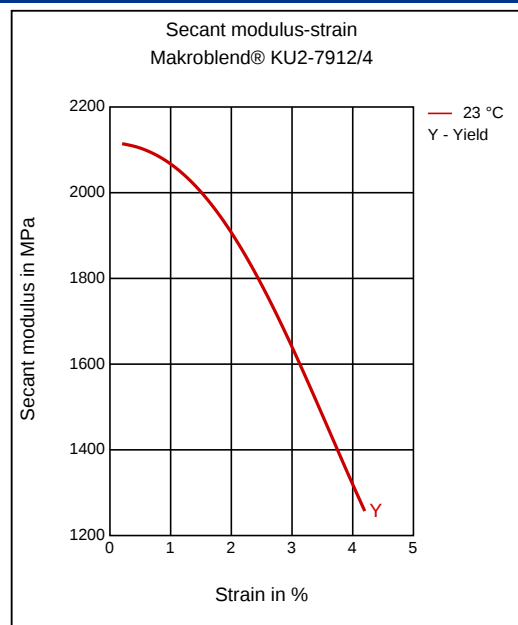
#### Shearstress-shear rate



#### Stress-strain



#### Secant modulus-strain



### Characteristics

#### Processing

Injection Molding

#### Additives

Release agent

#### Delivery form

Pellets

#### Special Characteristics

Impact modified

#### Injection Molding

PREPROCESSING

Max. Water content: 0.01 %

Drying temperature: 100 - 105 °C

Drying time:

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Circulating air drying oven (50 % fresh air) 4-12 h  
Fresh air dryer (high speed dryer) 2-4 h  
Dry air dryer 2-4 h

**PROCESSING**

Melt temperature: 250-270 °C  
Mold temperature: 60-80 °C

Use open nozzle.

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