



**Makrolon® DQ5162**

PC

Covestro Deutschland AG

- MVR (300 °C/1.2 kg) 34 cm³/10 min
- light diffusion grade
- high diffusion
- low viscosity
- UV stabilized
- easy release

| Rheological properties      | Value | Unit      | Test Standard   |
|-----------------------------|-------|-----------|-----------------|
| <b>ISO Data</b>             |       |           |                 |
| Melt volume-flow rate, MVR  | 34    | cm³/10min | ISO 1133        |
| Temperature                 | 300   | °C        | -               |
| Load                        | 1.2   | kg        | -               |
| Molding shrinkage, parallel | 0.7   | %         | ISO 294-4, 2577 |
| Molding shrinkage, normal   | 0.7   | %         | ISO 294-4, 2577 |

| Mechanical Properties           | Value    | Unit  | Test Standard |
|---------------------------------|----------|-------|---------------|
| <b>ISO Data</b>                 |          |       |               |
| Tensile Modulus                 | 2300     | MPa   | ISO 527       |
| Yield stress                    | 65       | MPa   | ISO 527       |
| Yield strain                    | 6        | %     | ISO 527       |
| Nominal strain at break         | >50      | %     | ISO 527       |
| Impact Strength (Charpy), +23°C | no break | kJ/m² | ISO 179/1eU   |
| Impact Strength (Charpy), -30°C | no break | kJ/m² | ISO 179/1eU   |
| Puncture - maximum force, +23°C | 4900     | N     | ISO 6603-2    |
| Puncture - maximum force, -30°C | 5900     | N     | ISO 6603-2    |
| Puncture energy, +23°C          | 44       | J     | ISO 6603-2    |
| Puncture energy, -30°C          | 50       | J     | ISO 6603-2    |
| Ball Indentation Hardness       | 120      | MPa   | ISO 2039-1    |

| Thermal Properties                        | Value | Unit  | Test Standard  |
|-------------------------------------------|-------|-------|----------------|
| <b>ISO Data</b>                           |       |       |                |
| Temp. of deflection under load (1.80 MPa) | 121   | °C    | ISO 75-1/-2    |
| Temp. of deflection under load (0.45 MPa) | 136   | °C    | ISO 75-1/-2    |
| Vicat softening temperature, 50°C/h 50N   | 141   | °C    | ISO 306        |
| Burning Behav. at thickness h             | V-2   | class | UL 94          |
| Thickness tested                          | 0.8   | mm    | -              |
| Glow Wire (GWFI, Flammability Index)      | 850   | °C    | IEC 60695-2-12 |
| GWFI - thickness tested (1)               | 0.75  | mm    | -              |
| Glow Wire (GWFI, Flammability Index)      | 850   | °C    | IEC 60695-2-12 |
| GWFI - thickness tested (2)               | 1.5   | mm    | -              |
| Glow Wire (GWFI, Flammability Index)      | 930   | °C    | IEC 60695-2-12 |
| GWFI - thickness tested (3)               | 3     | mm    | -              |
| Glow Wire Ignition Temperature            | 850   | °C    | IEC 60695-2-13 |
| GWIT - thickness tested (1)               | 0.75  | mm    | -              |
| Glow Wire Ignition Temperature            | 850   | °C    | IEC 60695-2-13 |
| GWIT - thickness tested (2)               | 1.5   | mm    | -              |
| Glow Wire Ignition Temperature            | 850   | °C    | IEC 60695-2-13 |
| GWIT - thickness tested (3)               | 3     | mm    | -              |

| Other Properties    | Value | Unit  | Test Standard  |
|---------------------|-------|-------|----------------|
| <b>ISO Data</b>     |       |       |                |
| Water Absorption    | 0.3   | %     | Sim. to ISO 62 |
| Humidity absorption | 0.12  | %     | Sim. to ISO 62 |
| Density             | 1200  | kg/m³ | ISO 1183       |

| Test specimen production              | Value | Unit | Test Standard |
|---------------------------------------|-------|------|---------------|
| <b>ISO Data</b>                       |       |      |               |
| Injection Molding, melt temperature   | 280   | °C   | ISO 294       |
| Injection Molding, mold temperature   | 80    | °C   | ISO 294       |
| Injection Molding, injection velocity | 200   | mm/s | ISO 294       |

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| Processing Recommendation Injection Molding | Value     | Unit | Test Standard |
|---------------------------------------------|-----------|------|---------------|
| Pre-drying - Temperature                    | 120       | °C   | -             |
| Pre-drying - Time                           | 2 - 3     | h    | -             |
| Processing humidity                         | ≤0.02     | %    | -             |
| Melt temperature                            | 250 - 300 | °C   | -             |
| Mold temperature                            | 80 - 120  | °C   | -             |
| Zone 1                                      | 230 - 240 | °C   | -             |
| Zone 2                                      | 250 - 260 | °C   | -             |
| Zone 3                                      | 260 - 270 | °C   | -             |
| Nozzle temperature                          | 260 - 270 | °C   | -             |
| Back pressure                               | 5 - 15    | MPa  | -             |

**Characteristics**

**Processing**

Injection Molding

**Special Characteristics**

UV stablized, Translucent

**Additives**

Release agent

**Features**

Light Diffusing