

## Technical Data Sheet



### ALCOM LD2 PC 1000 UV 18042 WT1040-18

|                        |                                                                                                                                                    |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Base Polymer           | Polycarbonate                                                                                                                                      |
| Filler/Additive System | special filler                                                                                                                                     |
| Special Features       | translucent,high light diffusion,light scattering,easy release (demoulding),good flow,processing stabilised,UV stabilised,injection moulding grade |
| Market Segment         | Automotive,Lighting                                                                                                                                |
| Application Area       | lighting,light transparent components                                                                                                              |
| Typical Applications   | lamp covers,display elements,operating elements                                                                                                    |
| Approvals              | GS93016                                                                                                                                            |

|                       |                                                                                                                                    |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Pre-Drying Conditions | 120 °C in a dry air (dessiccant) dryer for 2-4 h<br>120 °C in an air circulating dryer for 4-12 h<br>max. moisture content <0,02 % |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------|

|                               |                                                            |
|-------------------------------|------------------------------------------------------------|
| Processing Injection Moulding | melt temperature 270-310 °C<br>mould temperature 80-110 °C |
|-------------------------------|------------------------------------------------------------|

|         |                           |
|---------|---------------------------|
| Storage | dry, protected from light |
|---------|---------------------------|

| Properties                               | Value     | Dimension              | Test Norm   |
|------------------------------------------|-----------|------------------------|-------------|
| <b>Mechanical Properties</b>             |           |                        |             |
| Flexural Modulus                         | 2300      | MPa                    | ISO 178     |
| Flexural Stress (3.5% Strain)            | 76        | MPa                    | ISO 178     |
| Tensile Modulus                          | 2200      | MPa                    | ISO 527     |
| Tensile Stress at Yield                  | 66        | MPa                    | ISO 527     |
| Tensile Elongation at Yield              | 6         | %                      | ISO 527     |
| Tensile Elongation at Break              | 100       | %                      | ISO 527     |
| Impact Strength (Charpy, 23 °C)          | no break  | kJ/m <sup>2</sup>      | ISO 179/1eU |
| Impact Strength (Charpy, -40 °C)         | no break  | kJ/m <sup>2</sup>      | ISO 179/1eU |
| Notched Impact Strength (Charpy, 23 °C)  | 10        | kJ/m <sup>2</sup>      | ISO 179/1eA |
| Notched Impact Strength (Charpy, -40 °C) | 10        | kJ/m <sup>2</sup>      | ISO 179/1eA |
| <b>Thermal Properties</b>                |           |                        |             |
| Vicat B50                                | 143       | °C                     | ISO 306     |
| HDT / A (1,8 MPa)                        | 128       | °C                     | ISO 75-1/-2 |
| <b>Rheological Properties</b>            |           |                        |             |
| Melt Index (MVR)                         | 20        | cm <sup>3</sup> /10min | ISO 1133    |
| MVR temperature                          | 300       | °C                     | -           |
| MVR load                                 | 1.2       | kg                     | -           |
| Shrinkage (24h)                          | 0.6 - 0.9 | %                      | ISO 294-4   |

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#### Physical Properties

|         |      |                   |          |
|---------|------|-------------------|----------|
| Density | 1190 | kg/m <sup>3</sup> | ISO 1183 |
|---------|------|-------------------|----------|

#### Optical Properties

|                                          |      |   |           |
|------------------------------------------|------|---|-----------|
| Total Transmission T(Y) (d=1,0mm, A, 2°) | 42.5 | % | ISO 13468 |
| Total Transmission T(Y) (d=2,0mm, A, 2°) | 30   | % | ISO 13468 |
| Total Transmission T(Y) (d=3,0mm, A, 2°) | 22.5 | % | ISO 13468 |
| Total Transmission T(Y) (d=4,0mm, A, 2°) | 17   | % | ISO 13468 |
| Haze T(Y) (d=1,0 mm, A, 2°)              | 95.5 | % | ISO 13468 |
| Haze T(Y) (d=2,0 mm, A, 2°)              | 95.5 | % | ISO 13468 |
| Haze T(Y) (d=3,0 mm, A, 2°)              | 95.5 | % | ISO 13468 |
| Haze T(Y) (d=4,0 mm, A, 2°)              | 95.5 | % | ISO 13468 |
| Half Power Angle T(Y) (d=1,0mm, A, 2°)   | 2    | ° | -         |
| Half Power Angle T(Y) (d=2,0mm, A, 2°)   | 59   | ° | -         |
| Half Power Angle T(Y) (d=3,0mm, A, 2°)   | 62   | ° | -         |
| Half Power Angle T(Y) (d=4,0mm, A, 2°)   | 63   | ° | -         |

#### Diagrams

##### Stress-Strain

