# Plexiglas® Satinice df23 zk6BR

## Polymethyl Methacrylate Acrylic

### **Evonik Industries AG**

#### Message:

PLEXIGLAS® Satinice df23 zk6BR, based on PLEXIGLAS® Resist zk6BR, is an impact modified molding compound characterized by diffuse scattering of light.

Typical properties of impact modified PLEXIGLAS® molding compound are

high break resistance and impact strength

improved resistance to stress cracking

good weather resistance

high surface hardness and mar resistance

the pleasant feel and sound of the moldings.

PLEXIGLAS<sup>®</sup> df23 zk6BR is characterized by the following special properties:

excellent lightdiffusion combined with excellent light transmission

matte surfaces can be obtained by varying the extrusion parameters.

Application:

Used for extruding profiles and sheets, but also for injection molding items for lighting engineering applications

Examples:

applications that call for light diffusion combined with optimum transmission

| General Information |   |       |             |  |
|---------------------|---|-------|-------------|--|
| Additive            | Impact Modifier                             |       |             |  |
| Features            | Good Weather Resistance                     |       |             |  |
|                     | High ESCR (Stress Crack Resist.)            |       |             |  |
|                     | High Hardness<br>High Impact Resistance     |       |             |  |
|                     |   |       |             |  |
|                     | Light Stabilized                            |       |             |  |
|                     |   |       |             |  |
| Uses                | Flexible Grips                              |       |             |  |
|                     | Lighting Diffusers                          |       |             |  |
|                     | Profiles                                    |       |             |  |
|                     | Sheet                                       |       |             |  |
|                     |   |       |             |  |
| Forms               | Pellets                                     |       |             |  |
| Processing Method   | Extrusion                                   |       |             |  |
|                     | Injection Molding                           |       |             |  |
|                     |   |       |             |  |
| Multi-Point Data    | Isothermal Stress vs. Strain (ISO 11403-1)  |       |             |  |
|                     | Secant Modulus vs. Strain (ISO 11403-1)     |       |             |  |
|                     | Shear Modulus vs. Temperature (ISO 11403-1) |       |             |  |
|                     | Viscosity vs. Shear Rate (ISO 11403-2)      |       |             |  |
|                     |   |       |             |  |
| Physical            | Nominal Value                               | Unit  | Test Method |  |
| Density             | 1.15  | g/cm³ | ISO 1183    |  |

| Melt Volume-Flow Rate (MVR) (230°C/3.8  |               |           |                |
|---|---------------|-----------|----------------|
| kg)                                     | 1.30          | cm³/10min | ISO 1133       |
| Mechanical                              | Nominal Value | Unit      | Test Method    |
| Tensile Modulus                         | 1900          | MPa       | ISO 527-2/1    |
| Tensile Stress (Yield)                  | 46.0          | MPa       | ISO 527-2/50   |
| Tensile Strain (Yield)                  | 5.0           | %         | ISO 527-2/50   |
| Nominal Tensile Strain at Break         | 36            | %         | ISO 527-2      |
| Impact                                  | Nominal Value | Unit      | Test Method    |
| Charpy Notched Impact Strength (23°C)   | 6.0           | kJ/m²     | ISO 179/1      |
| Charpy Unnotched Impact Strength (23°C) | 50            | kJ/m²     | ISO 179/1eU    |
| Thermal                                 | Nominal Value | Unit      | Test Method    |
| Heat Deflection Temperature             |               |           |                |
| 0.45 MPa, Unannealed                    | 99.0          | °C        | ISO 75-2/B     |
| 1.8 MPa, Unannealed                     | 93.0          | °C        | ISO 75-2/A     |
| Glass Transition Temperature            | 109           | °C        | ISO 11357-2    |
| Vicat Softening Temperature             | 99.0          | °C        | ISO 306/B50    |
| CLTE - Flow (0 to 50°C)                 | 9.0E-5        | cm/cm/°C  | ISO 11359-2    |
| Flammability                            | Nominal Value | Unit      | Test Method    |
| Glow Wire Ignition Temperature          | 700           | °C        | IEC 60695-2-13 |
| Fire Rating                             | B2            |           | DIN 4102       |
| Half-Value Angle                        | 21.0          | 0         | DIN 5036       |
| Optical                                 | Nominal Value | Unit      | Test Method    |
| Transmittance <sup>1</sup>              | 81.0          | %         | ISO 13468-2    |
| Extrusion                               | Nominal Value | Unit      |                |
| Drying Temperature                      | < 85.0        | °C        |                |
| Drying Time                             | 2.0 to 3.0    | hr        |                |
| Melt Temperature                        | 230 to 260    | °C        |                |
| Die Temperature                         | 260           | °C        |                |
| NOTE                                    |               |           |                |
| 1.                                      | D65           |           |                |

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