

# Plexiglas® Resist zk30

Polymethyl Methacrylate Acrylic  
Evonik Industries AG

Message:

Product Profile:  
PLEXIGLAS® Resist zk30 is an amorphous, impact-modified thermoplastic molding compound (PMMA-I).  
Typical properties of impact-modified PLEXIGLAS® molding compounds are:  
excellent transmission and clarity  
brilliant appearance  
the pleasant feel and sound of the moldings.  
PLEXIGLAS® Resist zk30 is characterized by the following special properties:  
good break resistance and impact strength  
improved resistance to stress cracking  
certified dishwasher resistance  
AMECA listing.  
Application:  
Used for injection molding. Profile extrusion or coextrusion are also possible.  
Examples:  
lighting fixtures, writing and drawing utensils, domestic appliances and sanitaryware

| General Information |   |
|---------------------|---|
| Additive            | Impact Modifier                             |
| Features            | High Clarity                                |
|                     | High ESCR (Stress Crack Resist.)            |
|                     | High Impact Resistance                      |
|                     | Pleasing Surface Appearance                 |
| Uses                | Appliances                                  |
|                     | Flexible Grips                              |
|                     | Household Goods                             |
|                     | Profiles                                    |
|                     | Sanitary Products                           |
|                     | Writing Instruments                         |
| Forms               | Pellets                                     |
| Processing Method   | Coextrusion                                 |
|                     | Extrusion                                   |
|                     | Injection Molding                           |
| Multi-Point Data    | Creep Modulus vs. Time (ISO 11403-1)        |
|                     | Isochronous Stress vs. Strain (ISO 11403-1) |
|                     | 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/cm <sup>3</sup>      | ISO 1183     |
| Melt Volume-Flow Rate (MVR) (230°C/3.8 kg)   | 1.40          | cm <sup>3</sup> /10min | ISO 1133     |
| Water Absorption (Equilibrium, 23°C, 50% RH) | 0.34          | %                      | ISO 62       |
| Mechanical                                   | Nominal Value | Unit                   | Test Method  |
| Tensile Modulus                              | 2000          | MPa                    | ISO 527-2/1  |
| Tensile Stress (Yield)                       | 51.0          | MPa                    | ISO 527-2/50 |
| Tensile Strain (Yield)                       | 4.5           | %                      | ISO 527-2/50 |
| Nominal Tensile Strain at Break              | 27            | %                      | ISO 527-2    |
| Impact                                       | Nominal Value | Unit                   | Test Method  |
| Charpy Unnotched Impact Strength (23°C)      | 55            | kJ/m <sup>2</sup>      | ISO 179/1eU  |
| Thermal                                      | Nominal Value | Unit                   | Test Method  |
| Heat Deflection Temperature                  |               |                        |              |
| 0.45 MPa, Unannealed                         | 96.0          | °C                     | ISO 75-2/B   |
| 1.8 MPa, Unannealed                          | 91.0          | °C                     | ISO 75-2/A   |
| Glass Transition Temperature                 | 114           | °C                     | ISO 11357-2  |
| Vicat Softening Temperature                  | 98.0          | °C                     | ISO 306/B50  |
| CLTE - Flow (0 to 50°C)                      | 1.1E-4        | cm/cm/°C               | ISO 11359-2  |
| Flammability                                 | Nominal Value |                        | Test Method  |
| Flame Rating (1.60 mm)                       | HB            |                        | UL 94        |
| Optical                                      | Nominal Value | Unit                   | Test Method  |
| Refractive Index                             | 1.490         |                        | ISO 489      |
| Transmittance <sup>1</sup>                   | 90.0          | %                      | ISO 13468-2  |
| Injection                                    | Nominal Value | Unit                   |              |
| Drying Temperature                           | < 88.0        | °C                     |              |
| Drying Time                                  | 2.0 to 3.0    | hr                     |              |
| Processing (Melt) Temp                       | 230 to 240    | °C                     |              |
| Mold Temperature                             | 50.0 to 70.0  | °C                     |              |
| NOTE   |               |                        |              |
| 1.   | D65           |                        |              |

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