# Plexiglas® Resist zk5HC

### Polymethyl Methacrylate Acrylic

### **Evonik Industries AG**

### Message:

Product Profile:

PLEXIGLAS® Resist zk5HC is an amorphous, impact-modified thermoplastic molding compound (PMMA-I).

Typical properties of impact-modified

PLEXIGLAS® molding compounds are

high weather resistance

excellent transmission and clarity

brilliant appearance

the pleasant feel and sound of the moldings.

PLEXIGLAS® Resist zk5HC is characterized by the

following special properties:

high break resistance and impact strength

best resistance to stress cracking of all impact-modified PLEXIGLAS® molding compounds.

Application:

Used for extruding and coextruding sheets and

profiles.

Examples:

extruded/coextruded sheets and profiles for automotive bodies and the sanitaryware sector (bathtubs and shower trays) or crystal-clear luminaire covers for industrial plants that come into contact with aggressive media.

| General Information |                                  |
|---------------------|----------------------------------|
| UL YellowCard       | E65495-247820                    |
| Additive            | Impact Modifier                  |
| Features            | Good Weather Resistance          |
|                     | High Clarity                     |
|                     | High ESCR (Stress Crack Resist.) |
|                     | High Impact Resistance           |
|                     | Pleasing Surface Appearance      |
|                     |                                  |
| Uses                | Automotive Applications          |
|                     | Automotive Bumper                |
|                     | Automotive Exterior Parts        |
|                     | Automotive Exterior Trim         |
|                     | Household Goods                  |
|                     | Housings                         |
|                     | Profiles                         |
|                     | Protective Coverings             |
|                     | Sheet                            |
|                     |                                  |
| Forms               | Pellets                          |
| Processing Method   | Coextrusion                      |
|                     | Extrusion                        |

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                                 | 1.17          | g/cm³                  | ISO 1183     |
| Melt Volume-Flow Rate (MVR) (230°C/3.8  | 0.700         | 340                    | 150 1122     |
| kg)                                     | 0.700         | cm <sup>3</sup> /10min | ISO 1133     |
| Water Absorption                        |               |                        | ISO 62       |
| 23°C, 24 hr                             | 1.9           | %                      |              |
| Equilibrium, 23°C, 50% RH               | 0.50          | %                      |              |
| Mechanical                              | Nominal Value | Unit                   | Test Method  |
| Tensile Modulus                         | 2500          | MPa                    | ISO 527-2/1  |
| Tensile Stress (Yield)                  | 63.0          | MPa                    | ISO 527-2/50 |
| Tensile Strain (Yield)                  | 5.0           | %                      | ISO 527-2/50 |
| Nominal Tensile Strain at Break         | 28            | %                      | ISO 527-2    |
| Impact                                  | Nominal Value | Unit                   | Test Method  |
| Charpy Unnotched Impact Strength (23°C) | 55            | kJ/m²                  | ISO 179/1eU  |
| Thermal                                 | Nominal Value | Unit                   | Test Method  |
| Glass Transition Temperature            | 108           | °C                     | ISO 11357-2  |
| Vicat Softening Temperature             | 100           | °C                     | ISO 306/B50  |
| CLTE - Flow (0 to 50°C)                 | 9.0E-5        | cm/cm/°C               | ISO 11359-2  |
| Flammability                            | Nominal Value |                        | Test Method  |
| Flame Rating (1.60 mm)                  | НВ            |                        | UL 94        |
| Fire Rating                             | B2            |                        | DIN 4102     |
| Optical                                 | Nominal Value | Unit                   | Test Method  |
| Refractive Index                        | 1.490         |                        | ISO 489      |
| Transmittance <sup>1</sup>              | 92.0          | %                      | ISO 13468-2  |
| Injection                               | Nominal Value | Unit                   |              |
| Drying Temperature                      | < 90.0        | °C                     |              |
| Drying Time                             | 2.0 to 3.0    | hr                     |              |
| Processing (Melt) Temp                  | 220 to 260    | °C                     |              |
| Mold Temperature                        | 50.0 to 70.0  | °C                     |              |
| NOTE                                    |               |                        |              |
| 1.                                      | D65           |                        |              |

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