# Plexiglas® 8H

#### Polymethyl Methacrylate Acrylic

### **Evonik Industries AG**

#### Message:

Product Profile:

PLEXIGLAS® 8H is an amorphous thermoplastic molding compound (PMMA).

Typical properties of PLEXIGLAS® molding compounds are:

good flow

high mechanical strength, surface hardness and mar resistance

high light transmission

very good weather resistance

free colorability due to crystal clarity.

Special properties of PLEXIGLAS® 8H molding compound are:

optimum mechanical properties

increased heat deflection temperature

high melt strength

AMECA listing.

Application:

Used for extruding optical and technical profiles and sheets.

Examples

sheets, tubes, multi-skin sheets, coextrusion of window profiles and similar applications

Processing:

PLEXIGLAS® 8H can be processed on extruders with 3-zone general purpose screws for engineering thermoplastics.

Physical Form / Packaging:

PLEXIGLAS® molding compounds are supplied as pellets of uniform size, packaged in 25kg polyethylene bags or in 500kg boxes with PE lining; other packaging on request.

| General Information |   |
|---------------------|---|
| UL YellowCard       | E65495-247805                               |
| Features            | Good Colorability                           |
|                     | Good Flow                                   |
|                     | Good Melt Strength                          |
|                     | Good Weather Resistance                     |
|                     | High ESCR (Stress Crack Resist.)            |
|                     | High Hardness                               |
|                     |   |
| Uses                | Profiles                                    |
|                     | Sheet                                       |
|                     | Tubing                                      |
|                     | Windows & Doors                             |
|                     |   |
| Forms               | Pellets                                     |
| Processing Method   | Coextrusion                                 |
|                     | Extrusion                                   |
|                     |   |
| 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                                    | 1.19          | g/cm³     | ISO 1183    |
| Melt Volume-Flow Rate (MVR) (230°C/3.8 kg) | 0.800         | cm³/10min | ISO 1133    |
| Mechanical                                 | Nominal Value | Unit      | Test Method |
| Tensile Modulus                            | 3300          | MPa       | ISO 527-2/1 |
| Tensile Stress (Break)                     | 78.0          | MPa       | ISO 527-2/5 |
| Tensile Strain (Break)                     | 6.5           | %         | ISO 527-2/5 |
| Impact                                     | Nominal Value | Unit      | Test Method |
| Charpy Unnotched Impact Strength (23°C)    | 20            | kJ/m²     | ISO 179/1eU |
| Thermal                                    | Nominal Value | Unit      | Test Method |
| Vicat Softening Temperature                | 108           | °C        | ISO 306/B50 |
| CLTE - Flow (0 to 50°C)                    | 8.0E-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 |
| Extrusion                                  | Nominal Value | Unit      |             |
| Drying Temperature                         | < 98.0        | °C        |             |
| Drying Time                                | 2.0 to 3.0    | hr        |             |
| Melt Temperature                           | 220 to 260    | °C        |             |
| Die Temperature                            | 220 to 260    | °C        |             |
| NOTE                                       |               |           |             |
| 1.   | D65           |           |             |

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#### Recommended distributors for this material

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