# Ensinger TECACRYL®

### Acrylic

Ensinger Inc.

#### Message:

TECACRYL® offers excellent weather resistance, high light transmission, high mechanical strength, high surface hardness and mar resistance, good melt flow rate, and versitile colorability due to crystal clarity. In addition, a special property of TECACRYL® polymer includes superior heat resistance and a high level of transparency.

Because it is tough, more transparent than glass and twice as light, TECACRYL® is ideal for a wide variety of commercial and industrial applications.

| General Information          |                         |       |             |  |  |
|------------------------------|-------------------------|-------|-------------|--|--|
| Features                     | Durable                 |       |             |  |  |
|                              | Good Colorability       |       |             |  |  |
|                              | Good Flow               |       |             |  |  |
|                              | Good Toughness          |       |             |  |  |
|                              | Good Weather Resistance |       |             |  |  |
|                              | High Clarity            |       |             |  |  |
|                              | High Hardness           |       |             |  |  |
|                              | High Heat Resistance    |       |             |  |  |
|                              | High Strength           |       |             |  |  |
|                              |                         |       |             |  |  |
| Uses                         | Consumer Applications   |       |             |  |  |
|                              | Industrial Applications |       |             |  |  |
|                              |                         |       |             |  |  |
| Appearance                   | Clear/Transparent       |       |             |  |  |
| Forms                        | Shapes                  |       |             |  |  |
| Physical                     | Nominal Value           | Unit  | Test Method |  |  |
| Specific Gravity             | 1.56                    | g/cm³ | ASTM D792   |  |  |
| Water Absorption (24 hr)     | 0.30                    | %     | ASTM D570   |  |  |
| Hardness                     | Nominal Value           | Unit  | Test Method |  |  |
| Rockwell Hardness (M-Scale)  | 94                      |       | ASTM D785   |  |  |
| Mechanical                   | Nominal Value           | Unit  | Test Method |  |  |
| Tensile Modulus <sup>1</sup> | 3240                    | MPa   | ASTM D638   |  |  |
| Tensile Strength (Yield)     | 65.5                    | MPa   | ASTM D638   |  |  |
| Tensile Strain (Yield)       | 4.0 to 6.0              | %     | ISO 527-2   |  |  |
| Flexural Modulus             | 3380                    | MPa   | ASTM D790   |  |  |
| Flexural Strength            | 117                     | MPa   | ASTM D790   |  |  |
| Compressive Strength         | 117                     | MPa   | ASTM D695   |  |  |
| Impact                       | Nominal Value           | Unit  | Test Method |  |  |
| Notched Izod Impact          | 19                      | J/m   | ASTM D256   |  |  |
| Thermal                      | Nominal Value           | Unit  | Test Method |  |  |

| Deflection Temperature Under Load (1.8 |               |      |             |
|--|---------------|------|-------------|
| MPa, Unannealed)                       | 93.9          | °C   | ASTM D648   |
| Vicat Softening Temperature            | 105           | °C   | ASTM D1525  |
| Service Temperature - Long Term        | 90            | °C   |             |
| Flammability                           | 149           | °C   |             |
| Optical                                | Nominal Value | Unit | Test Method |
| Transmittance                          | 92.0          | %    | ASTM D1003  |
| Haze                                   | < 1.0         | %    | ASTM D1003  |
| Yellowness Index                       | < 1.0         | YI   | ASTM D1925  |
| NOTE                                   |               |      |             |
| 1.                                     | 1.0 mm/min    |      |             |

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