

# Diakon® TD525

Polymethyl Methacrylate Acrylic

Lucite International Inc.

## Message:

Diakon® TD525 is a Polymethyl Methacrylate Acrylic material. It is available in Europe for injection molding. Primary attribute of Diakon® TD525: Flame Rated.

Typical application of Diakon® TD525: Automotive

| General Information                               |                   |                   |                |
|---------------------------------------------------|-------------------|-------------------|----------------|
| UL YellowCard                                     | E108947-218762    |                   |                |
| Forms                                             | Pellets           |                   |                |
| Processing Method                                 | Injection Molding |                   |                |
| Physical                                          | Nominal Value     | Unit              | Test Method    |
| Density                                           | 1.16              | g/cm <sup>3</sup> | ISO 1183       |
| Melt Mass-Flow Rate (MFR)                         | 1.9               | g/10 min          | ISO 1133       |
| Molding Shrinkage                                 | 0.40 to 0.80      | %                 | ISO 294-4      |
| Water Absorption (Equilibrium, 23°C, 50% RH)      | 0.30              | %                 | ISO 62         |
| Hardness                                          | Nominal Value     | Unit              | Test Method    |
| Rockwell Hardness (M-Scale)                       | 60                |                   | ISO 2039-2     |
| Mechanical                                        | Nominal Value     | Unit              | Test Method    |
| Tensile Stress (Yield)                            | 58.0              | MPa               | ISO 527-2      |
| Tensile Strain (Yield)                            | 20                | %                 | ISO 527-2      |
| Flexural Modulus                                  | 2400              | MPa               | ISO 178        |
| Impact                                            | Nominal Value     | Unit              | Test Method    |
| Charpy Notched Impact Strength                    | 3.5               | kJ/m <sup>2</sup> | ISO 179/1eA    |
| Charpy Unnotched Impact Strength                  | 38                | kJ/m <sup>2</sup> | ISO 179/1eU    |
| Notched Izod Impact Strength                      | 3.2               | kJ/m <sup>2</sup> | ISO 180/1A     |
| Thermal                                           | Nominal Value     | Unit              | Test Method    |
| Heat Deflection Temperature (1.8 MPa, Unannealed) | 92.0              | °C                | ISO 75-2/A     |
| Vicat Softening Temperature                       |                   |                   |                |
| --                                                | 111               | °C                | ISO 306/A      |
| --                                                | 101               | °C                | ISO 306/B      |
| CLTE - Flow                                       | 1.0E-4            | cm/cm/°C          | ASTM E831      |
| Flammability                                      | Nominal Value     | Unit              | Test Method    |
| Flame Rating                                      | HB                |                   | UL 94          |
| Glow Wire Flammability Index                      | 650               | °C                | IEC 60695-2-12 |
| Optical                                           | Nominal Value     | Unit              | Test Method    |
| Refractive Index                                  | 1.490             |                   | ISO 489        |
| Transmittance                                     | 90.0              | %                 | ASTM D1003     |

| Haze               | 2.0           | %    | ASTM D1003 |
|--------------------|---------------|------|------------|
| Injection          | Nominal Value | Unit |            |
| Drying Temperature | 80.0          | °C   |            |
| Drying Time        | 3.0 to 4.0    | hr   |            |
| Hopper Temperature | 50.0 to 80.0  | °C   |            |
| Rear Temperature   | 190 to 240    | °C   |            |
| Middle Temperature | 210 to 260    | °C   |            |
| Front Temperature  | 210 to 280    | °C   |            |
| Nozzle Temperature | 220 to 270    | °C   |            |
| Mold Temperature   | 40.0 to 80.0  | °C   |            |

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