

# EL-Pro™ P842J

Polypropylene Impact Copolymer

SCG Chemicals Co., Ltd.

## Message:

EL-Pro P842J is an impact copolymer polypropylene resin suitable for injection molding process. This resin is recommended for product that requires very high stiffness and very high processibility.

| General Information                         |                             |                   |             |
|---|-----------------------------|-------------------|-------------|
| Features                                    | Good dimensional stability  |                   |             |
|   | Rigidity, high              |                   |             |
|   | Impact copolymer            |                   |             |
|   | Impact resistance, high     |                   |             |
|   | Workability, good           |                   |             |
|   | High liquidity              |                   |             |
|   | Compliance of Food Exposure |                   |             |
| Uses  | Electrical components       |                   |             |
|   | Home appliance components   |                   |             |
| Agency Ratings                              | FDA 21 CFR 177.1520         |                   |             |
| Forms                                       | Particle                    |                   |             |
| Processing Method                           | Injection molding           |                   |             |
| Physical                                    | Nominal Value               | Unit              | Test Method |
| Density                                     | 0.910                       | g/cm <sup>3</sup> | ASTM D1505  |
| Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)   | 40                          | g/10 min          | ASTM D1238  |
| Molding Shrinkage                           |                             |                   | ASTM D955   |
| Flow: 2.00mm                                | 1.4                         | %                 | ASTM D955   |
| Transverse flow: 2.00mm                     | 1.3                         | %                 | ASTM D955   |
| Hardness                                    | Nominal Value               | Unit              | Test Method |
| Rockwell Hardness (R-Scale)                 | 80                          |                   | ASTM D785   |
| Mechanical                                  | Nominal Value               | Unit              | Test Method |
| Tensile Strength - Across Flow <sup>1</sup> |                             |                   | ASTM D638   |
| Yield                                       | 28.9                        | MPa               | ASTM D638   |
| Fracture                                    | 17.7                        | MPa               | ASTM D638   |
| Tensile Elongation (Break)                  | 60                          | %                 | ASTM D638   |
| Flexural Modulus                            | 1420                        | MPa               | ASTM D790   |
| Impact                                      | Nominal Value               | Unit              | Test Method |
| Notched Izod Impact                         |                             |                   | ASTM D256   |
| -20°C                                       | 34                          | J/m               | ASTM D256   |
| 0°C   | 44                          | J/m               | ASTM D256   |

| 23°C  | 59            | J/m  | ASTM D256   |
|---|---------------|------|-------------|
| Thermal   | Nominal Value | Unit | Test Method |
| Deflection Temperature Under Load   |               |      | ASTM D648   |
| 0.45 MPa, not annealed  | 115           | °C   | ASTM D648   |
| 1.8 MPa, not annealed   | 55.0          | °C   | ASTM D648   |
| Brittleness Temperature   | -20.0         | °C   | ASTM D746   |
| Vicat Softening Temperature   | 150           | °C   | ASTM D1525  |
| Melting Temperature   | 120 - 163     | °C   | ASTM D2117  |
| Flammability  | Nominal Value |      | Test Method |
| Flame Rating  | HB            |      | UL 94       |
| Optical   | Nominal Value | Unit | Test Method |
| Gloss   | 30            |      | ASTM D2457  |
| Haze  | 80            | %    | ASTM D1003  |
| Injection   | Nominal Value | Unit |             |
| Processing (Melt) Temp  | 230 - 270     | °C   |             |
| Mold Temperature  | 25.0 - 70.0   | °C   |             |
| Injection Rate  | Fast          |      |             |
| Screw Speed   | 40 - 70       | rpm  |             |
| Injection instructions  |               |      |             |
| Injection Pressure: 40 to 80% of max. pressurePacking and Holding Pressure: 30 to 60% of max. pressureBack Pressure: 10% of max. pressure |               |      |             |
| NOTE  |               |      |             |
| 1.  | 50 mm/min     |      |             |

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#### Recommended distributors for this material

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