

# Optimum® 2000

Copolyester

RAUH Polymers, Inc.

## Message:

Optimum®2000 is a copolyester product. It can be processed by extrusion or injection molding and is available in North America. The main characteristics are: flame retardant/rated flame.

| General Information                                               |                   |                   |             |
|-------------------------------------------------------------------|-------------------|-------------------|-------------|
| Processing Method                                                 | Extrusion         |                   |             |
|                                                                   | Injection molding |                   |             |
| Physical                                                          | Nominal Value     | Unit              | Test Method |
| Specific Gravity                                                  | 1.22              | g/cm <sup>3</sup> | ASTM D792   |
| Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)                          | 100               | g/10 min          | ASTM D1238  |
| Molding Shrinkage - Flow (3.18 mm)                                | 0.50 - 0.80       | %                 | ASTM D955   |
| Mechanical                                                        | Nominal Value     | Unit              | Test Method |
| Tensile Strength <sup>1</sup> (Yield, 3.18 mm)                    | 48.3              | MPa               | ASTM D638   |
| Tensile Elongation <sup>2</sup> (Break, 3.18 mm)                  | 500               | %                 | ASTM D638   |
| Flexural Modulus (3.18 mm)                                        | 1720              | MPa               | ASTM D790   |
| Impact                                                            | Nominal Value     | Unit              | Test Method |
| Notched Izod Impact                                               |                   |                   | ASTM D256   |
| -40°C, 3.18 mm                                                    | No Break          |                   | ASTM D256   |
| 23°C, 3.18 mm                                                     | 1400              | J/m               | ASTM D256   |
| Instrumented Dart Impact                                          | 36.2              | J                 | ASTM D3763  |
| Thermal                                                           | Nominal Value     | Unit              | Test Method |
| Deflection Temperature Under Load (0.45 MPa, Unannealed, 3.18 mm) | 65.6              | °C                | ASTM D648   |
| Flammability                                                      | Nominal Value     |                   | Test Method |
| Flame Rating (1.60 mm)                                            | HB                |                   | UL 94       |
| Injection                                                         | Nominal Value     | Unit              |             |
| Drying Temperature                                                | 76.7 - 82.2       | °C                |             |
| Drying Time                                                       | 2.0 - 4.0         | hr                |             |
| Suggested Max Moisture                                            | 0.020             | %                 |             |
| Rear Temperature                                                  | 204 - 216         | °C                |             |
| Middle Temperature                                                | 204 - 227         | °C                |             |
| Front Temperature                                                 | 216 - 232         | °C                |             |
| Nozzle Temperature                                                | 227 - 246         | °C                |             |
| Processing (Melt) Temp                                            | 227 - 232         | °C                |             |
| Mold Temperature                                                  | 21.1 - 37.8       | °C                |             |
| Injection Pressure                                                | 55.2 - 68.9       | MPa               |             |
| Injection Rate                                                    | Moderate          |                   |             |

|                  |               |      |
|------------------|---------------|------|
| Holding Pressure | 41.4 - 55.2   | MPa  |
| Back Pressure    | 0.00 - 2.76   | MPa  |
| Extrusion        | Nominal Value | Unit |
| Melt Temperature | 204           | °C   |

Extrusion instructions

Down Stack:  
Top: 185 to 200°F  
Middle: 165 to 185°F  
Bottom: 185 to 200°F  
Up Stack:  
Top: 185 to 200°F  
Middle: 175 to 190°F  
Bottom: 170 to 180°F

NOTE

- |    |        |
|----|--------|
| 1. | Type 1 |
| 2. | Type 1 |

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