

# POLYFLAM® RIPP 4000

Polypropylene Copolymer

A. Schulman Europe

Message:

Unfilled flame-retardant PP-Copolymer, halogenfree

| General Information                         |                   |                        |                 |
|---------------------------------------------|-------------------|------------------------|-----------------|
| Features                                    | Copolymer         |                        |                 |
|                                             | Workability, good |                        |                 |
|                                             | Halogen-free      |                        |                 |
|                                             | Flame retardancy  |                        |                 |
| Processing Method                           | Injection molding |                        |                 |
| Resin ID (ISO 1043)                         | PP FR(51)         |                        |                 |
| Physical                                    | Nominal Value     | Unit                   | Test Method     |
| Density                                     | 1.05              | g/cm <sup>3</sup>      | ISO 1183/A      |
| Melt Volume-Flow Rate (MVR) (230°C/2.16 kg) | 13.0              | cm <sup>3</sup> /10min | ISO 1133        |
| Mechanical                                  | Nominal Value     | Unit                   | Test Method     |
| Tensile Modulus                             | 2200              | MPa                    | ISO 527-2/1A/1  |
| Tensile Stress                              |                   |                        | ISO 527-2/1A/50 |
| Yield                                       | 20.0              | MPa                    | ISO 527-2/1A/50 |
| Fracture                                    | 15.7              | MPa                    | ISO 527-2/1A/50 |
| Tensile Strain (Yield)                      | 3.2               | %                      | ISO 527-2/1A/50 |
| Nominal Tensile Strain at Break             | 27                | %                      | ISO 527-2/1A/50 |
| Impact                                      | Nominal Value     | Unit                   | Test Method     |
| Charpy Notched Impact Strength              |                   |                        | ISO 179/1eA     |
| -30°C                                       | 2.3               | kJ/m <sup>2</sup>      | ISO 179/1eA     |
| 23°C                                        | 4.0               | kJ/m <sup>2</sup>      | ISO 179/1eA     |
| Charpy Unnotched Impact Strength            |                   |                        | ISO 179/1eU     |
| -30°C                                       | 16                | kJ/m <sup>2</sup>      | ISO 179/1eU     |
| 23°C                                        | 55                | kJ/m <sup>2</sup>      | ISO 179/1eU     |
| Thermal                                     | Nominal Value     | Unit                   | Test Method     |
| Heat Deflection Temperature                 |                   |                        |                 |
| 0.45 MPa, not annealed                      | 97.0              | °C                     | ISO 75-2/B      |
| 1.8 MPa, not annealed                       | 52.0              | °C                     | ISO 75-2/Af     |
| Vicat Softening Temperature                 |                   |                        |                 |
| --                                          | 151               | °C                     | ISO 306/A50     |
| --                                          | 77.0              | °C                     | ISO 306/B50     |
| Electrical                                  | Nominal Value     | Unit                   | Test Method     |

| Comparative Tracking Index     | 600           | V    | IEC 60112            |
|--------------------------------|---------------|------|----------------------|
| Flammability                   | Nominal Value | Unit | Test Method          |
| Flammability Classification    |               |      | IEC 60695-11-10, -20 |
| 0.8 mm                         | V-0           |      | IEC 60695-11-10, -20 |
| 1.6 mm                         | V-0           |      | IEC 60695-11-10, -20 |
| 3.2 mm                         | V-0           |      | IEC 60695-11-10, -20 |
|                                | 5V            |      |                      |
| 3.0 mm                         | 5VA           |      | IEC 60695-11-10, -20 |
| Glow Wire Flammability Index   |               |      | IEC 60695-2-12       |
| 0.75 mm                        | 960           | °C   | IEC 60695-2-12       |
| 1.5 mm                         | 960           | °C   | IEC 60695-2-12       |
| 3.0 mm                         | 960           | °C   | IEC 60695-2-12       |
| Glow Wire Ignition Temperature |               |      | IEC 60695-2-13       |
| 0.75 mm                        | 725           | °C   | IEC 60695-2-13       |
| 1.5 mm                         | 725           | °C   | IEC 60695-2-13       |
| 3.0 mm                         | 725           | °C   | IEC 60695-2-13       |
| Additional Information         |               |      |                      |

1.)  
Not for use in food contact applications2.)  
Not for use in medical or pharmaceutical applications

| Injection              | Nominal Value | Unit   |
|------------------------|---------------|--------|
| Drying Temperature     | 70            | °C     |
| Drying Time            | 2.0 - 4.0     | hr     |
| Processing (Melt) Temp | 180 - 210     | °C     |
| Mold Temperature       | 40 - 80       | °C     |
| Injection Pressure     | 80.0 - 120    | MPa    |
| Injection Rate         | Slow-Moderate |        |
| Holding Pressure       | 40.0 - 90.0   | MPa    |
| Back Pressure          | 5.00 - 10.0   | MPa    |
| Screw Speed            |               | mm/sec |

#### Injection instructions

PredryingPredrying at 70°C for 2-4 hours is recommended as a precaution.ReprocessingAddition of regrind is normally possible, but it must be tested in each case regarding the percentage and requirements of the article. Thermal damage during first processing depends on processing parameters and the geometry of flow path and article.Shut downAvoid long melt residence time. Purge with base polymer or with polyolefines.FinishingMachining is usually possible.

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