

## Technical Data Sheet

### Polyflam RIPP 510 D RED 58998



Polypropylene Copolymer

#### Product Description

Flame retardant PP-copolymer - grade without PBDE

**Processing Method** Injection Molding

**Attribute** Copolymer

**Additive** Flame Retardant

| Typical Properties                            | Nominal Value | Units      | Test Method    |
|-----------------------------------------------|---------------|------------|----------------|
| <b>Physical</b>                               |               |            |                |
| Melt Volume Flow Rate, (230 °C/2.16 kg)       | 5.5           | cm³/10 min | ISO 1133       |
| Density, (Method A)                           | 0.940         | g/cm³      | ISO 1183       |
| <b>Mechanical</b>                             |               |            |                |
| Tensile Stress at Yield, (Type 1A, 50 mm/min) | 23.0          | MPa        | ISO 527-2      |
| Tensile Strain at Yield, (Type 1A, 50 mm/min) | 12            | %          | ISO 527-2      |
| Tensile Modulus, (1 mm/min, Type 1A)          | 1100          | MPa        | ISO 527-1      |
| <b>Impact</b>                                 |               |            |                |
| Charpy Impact Strength - Notched              |               |            |                |
| (23 °C, Type 1, Edgewise, Notch A)            | 20            | kJ/m²      | ISO 179        |
| (-30 °C, Type 1, Edgewise, Notch A)           | 3.0           | kJ/m²      | ISO 179        |
| Charpy Impact Strength - Unnotched            |               |            |                |
| (23 °C, Type 1, Edgewise)                     | No Break      |            | ISO 179        |
| (-30 °C, Type 1, Edgewise)                    | 60            | kJ/m²      | ISO 179        |
| Notched Izod Impact Strength                  |               |            |                |
| (23 °C, Type 1, Notch A)                      | 7.0           | kJ/m²      | ISO 180        |
| (-40 °C, Type 1, Notch A)                     | 4.5           | kJ/m²      | ISO 180        |
| Notched Izod Impact (Area), (23 °C)           | 10.0          | kJ/m²      | ASTM D256      |
| Unnotched Izod Impact Strength                |               |            |                |
| (23 °C, Type 1)                               | No Break      |            | ISO 180        |
| (-40 °C, Type 1)                              | 45            | kJ/m²      | ISO 180        |
| <b>Hardness</b>                               |               |            |                |
| Ball Indentation Hardness, (H 358/30)         | 62.0          | MPa        | ISO 2039-1     |
| Ball Pressure Test, (120 °C)                  | Pass          |            | IEC 60695-10-2 |
| <b>Thermal</b>                                |               |            |                |
| Vicat Softening Temperature                   |               |            |                |
| (B (50N), 50 °C/h)                            | 74.0          | °C         | ISO 306        |
| (A (10N), 120 °C/h)                           | 142           | °C         | ISO 306        |

|                                                                     |          |       |                      |
|---------------------------------------------------------------------|----------|-------|----------------------|
| Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise) | 105      | °C    | ISO 75-2/B           |
| Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise) | 60.0     | °C    | ISO 75-2/A           |
| <b>Electrical</b>                                                   |          |       |                      |
| Volume Resistivity                                                  | >1.0E+13 | ohm*m | IEC 62631-3-1        |
| Comparative Tracking Index (CTI)                                    | 600      | V     | IEC 60112            |
| Surface Resistivity                                                 | >1.0E+15 | ohm   | IEC 60093            |
| <b>Flammable</b>                                                    |          |       |                      |
| Glow Wire Flammability Index                                        |          |       |                      |
| (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                                      |          |       |                      |
| (0.75 mm)                                                           | 700      | °C    | IEC 60695-2-13       |
| (1.5 mm)                                                            | 675      | °C    | IEC 60695-2-13       |
| (3.0 mm)                                                            | 675      | °C    | IEC 60695-2-13       |
| Oxygen Index                                                        | 29       | %     | ISO 4589-2           |
| <b>UL Information</b>                                               |          |       |                      |
| Flammability Classification                                         |          |       |                      |
| (0.75 mm)                                                           | V-2      |       | IEC 60695-11-10, -20 |
| (1.5 mm)                                                            | V-2      |       | IEC 60695-11-10, -20 |
| UL File Number                                                      | E86615   |       |                      |

| Injection Parameters   | Nominal Value | Units  |
|------------------------|---------------|--------|
| Drying Time            | 2.0 to 4.0    | hr     |
| Drying Temperature     | 70 to 80      | °C     |
| Nozzle Temperature     | 220           | °C     |
| Screw Speed            | <300          | mm/sec |
| Processing (Melt) Temp | 180 to 220    | °C     |
| Front Temperature      | 210           | °C     |
| Holding Pressure       | 40.0 to 90.0  | MPa    |
| Middle Temperature     | 200           | °C     |
| Rear Temperature       | 180           | °C     |
| Injection Rate         | Slow-Moderate |        |
| Back Pressure          | 5.00 to 10.0  | MPa    |
| Mold Temperature       | 40 to 80      | °C     |
| Injection Pressure     | 80.0 to 120   | MPa    |
| Cushion                | <5.00         | mm     |