

## Technical Data Sheet

### Polyflam RMMB 40400 NAT



Polycarbonate + ABS

#### Product Description

Flame retardant ABS/PC blend for higher temperature resistance and impact strength; halogen free according to DIN VDE 0472 part 815

**Processing Method** Injection Molding

**Attribute** Good Impact Resistance; Good Processability; Halogen Free; Low Temperature Impact Resistance

**Additive** Flame Retardant

| Typical Properties                                                  | Nominal Value | Units                   | Test Method    |
|---------------------------------------------------------------------|---------------|-------------------------|----------------|
| <b>Physical</b>                                                     |               |                         |                |
| Melt Volume Flow Rate, (260 °C/5.0 kg)                              | 28            | cm <sup>3</sup> /10 min | ISO 1133       |
| Density, (Method A)                                                 | 1.18          | g/cm <sup>3</sup>       | ISO 1183       |
| <b>Mechanical</b>                                                   |               |                         |                |
| Tensile Stress at Yield, (Type 1A, 50 mm/min)                       | 63.0          | MPa                     | ISO 527-2      |
| Tensile Strain at Yield, (Type 1A, 50 mm/min)                       | 5.0           | %                       | ISO 527-2      |
| Tensile Modulus, (1 mm/min, Type 1A)                                | 2400          | MPa                     | ISO 527-1      |
| <b>Impact</b>                                                       |               |                         |                |
| Charpy Impact Strength - Notched                                    |               |                         |                |
| (23 °C, Type 1, Edgewise, Notch A)                                  | 63            | kJ/m <sup>2</sup>       | ISO 179        |
| (-30 °C, Type 1, Edgewise, Notch A)                                 | 21            | kJ/m <sup>2</sup>       | ISO 179        |
| Charpy Impact Strength - Unnotched                                  |               |                         |                |
| (23 °C, Type 1, Edgewise)                                           | No Break      |                         | ISO 179        |
| (-30 °C, Type 1, Edgewise)                                          | No Break      |                         | ISO 179        |
| <b>Hardness</b>                                                     |               |                         |                |
| Ball Pressure Test, (105 °C)                                        | Pass          |                         | IEC 60695-10-2 |
| <b>Thermal</b>                                                      |               |                         |                |
| Vicat Softening Temperature                                         |               |                         |                |
| (B (50N), 50 °C/h)                                                  | 110           | °C                      | ISO 306        |
| (A (10N), 50 °C/h)                                                  | 115           | °C                      | ISO 306        |
| Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise) | 103           | °C                      | ISO 75-2/B     |
| Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise) | 95.0          | °C                      | ISO 75-2/A     |
| RTI Elec                                                            |               |                         |                |
| (1.5 mm)                                                            | 60.0          | °C                      | UL 746B        |
| (3.0 mm)                                                            | 60.0          | °C                      | UL 746B        |

|                                  |          |        |                      |
|----------------------------------|----------|--------|----------------------|
| RTI Imp                          |          |        |                      |
| (1.5 mm)                         | 60.0     | °C     | UL 746B              |
| (3.0 mm)                         | 60.0     | °C     | UL 746B              |
| RTI Str                          |          |        |                      |
| (1.5 mm)                         | 60.0     | °C     | UL 746B              |
| (3.0 mm)                         | 60.0     | °C     | UL 746B              |
| <b>Electrical</b>                |          |        |                      |
| Volume Resistivity               | >1.0E+13 | ohm*m  | IEC 62631-3-1        |
| Comparative Tracking Index (CTI) | 225      | V      | IEC 60112            |
| High Amp Arc Ignition            |          |        | UL 746A              |
| Surface Resistivity              | >1.0E+15 | ohm    | IEC 60093            |
| <b>Flammable</b>                 |          |        |                      |
| Hot-wire Ignition (HWI)          |          |        | UL 746A              |
| Burning Rate                     |          |        |                      |
| (2.00 mm, Self-Extinguishing)    | 0.0      | mm/min | ISO 3795             |
| (2.00 mm, Self-Extinguishing)    | 0.0      | mm/min | FMVSS 302            |
| Glow Wire Flammability Index     |          |        |                      |
| (1.5 mm)                         | 960      | °C     | IEC 60695-2-12       |
| (3.0 mm)                         | 960      | °C     | IEC 60695-2-12       |
| (3.5 mm)                         | 960      | °C     | IEC 60695-2-12       |
| Glow Wire Ignition Temperature   |          |        |                      |
| (1.5 mm)                         | 800      | °C     | IEC 60695-2-13       |
| (3.0 mm)                         | 800      | °C     | IEC 60695-2-13       |
| (3.5 mm)                         | 800      | °C     | IEC 60695-2-13       |
| Oxygen Index                     | 33       | %      | ISO 4589-2           |
| <b>UL Information</b>            |          |        |                      |
| Flame Rating                     |          |        |                      |
| (1.5 mm)                         | V-0      |        | UL 94                |
| (3.0 mm)                         | V-0      |        | UL 94                |
| (3.5 mm)                         | V-0      |        | UL 94                |
| (3.5 mm)                         | 5VA      |        | UL 94                |
| Flammability Classification      |          |        |                      |
| (1.5 mm)                         | V-0      |        | IEC 60695-11-10, -20 |
| (3.0 mm)                         | V-0      |        | IEC 60695-11-10, -20 |
| (3.5 mm)                         | 5VA      |        | IEC 60695-11-10, -20 |
| (3.5 mm)                         | V-0      |        | IEC 60695-11-10, -20 |
| UL File Number                   | E86615   |        |                      |

|                             |               | Nominal Value | Units |
|-----------------------------|---------------|---------------|-------|
| <b>Injection Parameters</b> |               |               |       |
| Drying Time                 | 2.0 to 4.0    | hr            |       |
| Drying Temperature          | 80 to 100     | °C            |       |
| Suggested Max Moisture      | 0.02          | %             |       |
| Screw Speed                 | <300          | mm/sec        |       |
| Processing (Melt) Temp      | 260 to 270    | °C            |       |
| Injection Rate              | Slow-Moderate |               |       |
| Back Pressure               | 5.00 to 10.0  | MPa           |       |
| Mold Temperature            | 60 to 80      | °C            |       |