

## Technical Data Sheet

### *Polyflam* RABS 90000 UV5 CA GRY69780



Acrylonitrile Butadiene Styrene

#### Product Description

Flame retardant ABS grade without PBDE, higher thermal stability and permanent antistatic properties

**Processing Method** Injection Molding

**Attribute** Good Processability; Good Thermal Stability; Non Blooming

**Additive** Flame Retardant

| Typical Properties                                                  | Nominal Value | Units                   | Test Method    |
|---------------------------------------------------------------------|---------------|-------------------------|----------------|
| <b>Physical</b>                                                     |               |                         |                |
| Melt Volume Flow Rate, (220 °C/10.0 kg)                             | 44            | cm <sup>3</sup> /10 min | ISO 1133       |
| Density, (Method A)                                                 | 1.36          | g/cm <sup>3</sup>       | ISO 1183       |
| <b>Mechanical</b>                                                   |               |                         |                |
| Tensile Stress at Yield, (Type 1A, 50 mm/min)                       | 30.0          | 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)                                | 1550          | MPa                     | ISO 527-1      |
| <b>Impact</b>                                                       |               |                         |                |
| Charpy Impact Strength - Notched                                    |               |                         |                |
| (23 °C, Type 1, Edgewise, Notch A)                                  | 7.3           | kJ/m <sup>2</sup>       | ISO 179        |
| (-30 °C, Type 1, Edgewise, Notch A)                                 | 2.5           | 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)                                          | 52            | kJ/m <sup>2</sup>       | ISO 179        |
| <b>Hardness</b>                                                     |               |                         |                |
| Ball Pressure Test, (90 °C)                                         | Pass          |                         | IEC 60695-10-2 |
| <b>Thermal</b>                                                      |               |                         |                |
| Vicat Softening Temperature                                         |               |                         |                |
| (B (50N), 50 °C/h)                                                  | 79.0          | °C                      | ISO 306        |
| (A (10N), 50 °C/h)                                                  | 101           | °C                      | ISO 306        |
| Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise) | 81.0          | °C                      | ISO 75-2/B     |
| Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise) | 68.0          | °C                      | ISO 75-2/A     |
| RTI Elec, (3.0 mm)                                                  | 60.0          | °C                      | UL 746B        |
| RTI Imp, (3.0 mm)                                                   | 60.0          | °C                      | UL 746B        |
| RTI Str, (3.0 mm)                                                   | 60.0          | °C                      | UL 746B        |
| <b>Electrical</b>                                                   |               |                         |                |
| Comparative Tracking Index (CTI)                                    | 325           | V                       | IEC 60112      |

|                                       |                      |        |                      |
|---------------------------------------|----------------------|--------|----------------------|
| Surface Resistivity                   | 2700000000<br>0      | ohm    | IEC 60093            |
| <b>Flammable</b>                      |                      |        |                      |
| 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       |
| Glow Wire Ignition Temperature        |                      |        |                      |
| (1.5 mm)                              | 650                  | °C     | IEC 60695-2-13       |
| (3.0 mm)                              | 650                  | °C     | IEC 60695-2-13       |
| Oxygen Index                          | 27                   | %      | ISO 4589-2           |
| <b>UL Information</b>                 |                      |        |                      |
| Flame Rating, (3.0 mm)                | V-1                  |        | UL 94                |
| Flammability Classification, (3.0 mm) | V-1                  |        | IEC 60695-11-10, -20 |
| UL File Number                        | E86615-<br>103906164 |        |                      |

| Injection Parameters   | Nominal Value     | Units  |
|------------------------|-------------------|--------|
| Drying Time            | 2.0 to 4.0        | hr     |
| Drying Temperature     | 70 to 80          | °C     |
| Screw Speed            | <300              | mm/sec |
| Processing (Melt) Temp | 220 to 240        | °C     |
| Injection Rate         | Slow-<br>Moderate |        |
| Back Pressure          | 5.00 to 10.0      | MPa    |
| Mold Temperature       | 40 to 60          | °C     |