

## Technical Data Sheet

**Polyflam RABS 90000 UV5 WHI86715**

Acrylonitrile Butadiene Styrene

**Product Description**

Flame retardant ABS standard grade without PBDE and higher thermal stability

|                          |   |
|--------------------------|---|
| <b>Processing Method</b> | Injection Molding   |
| <b>Attribute</b>         | Good Processability; Good Thermal Stability; Non Blooming |
| <b>Additive</b>          | Flame Retardant   |
| <b>Resin ID</b>          | ABS FR17  |

| Typical Properties  | Nominal Value | Units                   | Test Method    |
|---|---------------|-------------------------|----------------|
| <b>Physical</b>   |               |                         |                |
| Melt Volume Flow Rate, (220 °C/10.0 kg)                             | 30            | cm <sup>3</sup> /10 min | ISO 1133       |
| Density, (Method A)   | 1.20          | g/cm <sup>3</sup>       | ISO 1183       |
| <b>Mechanical</b>   |               |                         |                |
| Tensile Stress at Yield, (Type 1A, 50 mm/min)                       | 40.0          | MPa                     | ISO 527-2      |
| Tensile Strain at Yield, (Type 1A, 50 mm/min)                       | 3.0           | %                       | ISO 527-2      |
| Tensile Modulus, (1 mm/min, Type 1A)                                | 2200          | MPa                     | ISO 527-1      |
| <b>Impact</b>   |               |                         |                |
| Charpy Impact Strength - Notched                                    |               |                         |                |
| (23 °C, Type 1, Edgewise, Notch A)                                  | 10            | kJ/m <sup>2</sup>       | ISO 179        |
| (-30 °C, Type 1, Edgewise, Notch A)                                 | 5.0           | kJ/m <sup>2</sup>       | ISO 179        |
| Charpy Impact Strength - Unnotched                                  |               |                         |                |
| (23 °C, Type 1, Edgewise)   | 80            | kJ/m <sup>2</sup>       | ISO 179        |
| (-30 °C, Type 1, Edgewise)  | 45            | kJ/m <sup>2</sup>       | ISO 179        |
| <b>Hardness</b>   |               |                         |                |
| Ball Indentation Hardness   | 113           | MPa                     | ISO 2039-1     |
| Ball Pressure Test, (90 °C)   | Pass          |                         | IEC 60695-10-2 |
| <b>Thermal</b>  |               |                         |                |
| Vicat Softening Temperature   |               |                         |                |
| (B (50N), 50 °C/h)  | 96.0          | °C                      | ISO 306        |
| (A (10N), 50 °C/h)  | 105           | °C                      | ISO 306        |
| Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise) | 92.0          | °C                      | ISO 75-2/B     |
| Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise) | 80.0          | °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 |

**Electrical**

|                                  |          |       |               |
|----------------------------------|----------|-------|---------------|
| Volume Resistivity               | >1.0E+13 | ohm*m | IEC 62631-3-1 |
| Comparative Tracking Index (CTI) | 475      | V     | IEC 60112     |
| High Amp Arc Ignition            |          |       | UL 746A       |
| Surface Resistivity              | >1.0E+15 | ohm   | IEC 60093     |

**Flammable**

|                                |     |        |                |
|--------------------------------|-----|--------|----------------|
| 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 |
| Glow Wire Ignition Temperature |     |        |                |
| (1.5 mm)                       | 725 | °C     | IEC 60695-2-13 |
| (3.0 mm)                       | 725 | °C     | IEC 60695-2-13 |
| Oxygen Index                   | 28  | %      | ISO 4589-2     |

**UL Information**

|                             |        |  |                      |
|-----------------------------|--------|--|----------------------|
| Flame Rating                |        |  |                      |
| (1.5 mm)                    | V-0    |  | UL 94                |
| (3.0 mm)                    | V-0    |  | UL 94                |
| Flammability Classification |        |  |                      |
| (1.5 mm)                    | V-0    |  | IEC 60695-11-10, -20 |
| (3.0 mm)                    | V-0    |  | IEC 60695-11-10, -20 |
| UL File Number              | E86615 |  |                      |

| <b>Injection Parameters</b> | <b>Nominal Value</b> | <b>Units</b> |
|-----------------------------|----------------------|--------------|
| 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-Moderate        |              |
| Back Pressure               | 5.00 to 10.0         | MPa          |
| Mold Temperature            | 40 to 60             | °C           |