Technical Data Sheet

# *Polyflam* RMMB 40400 GRY6-3411

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

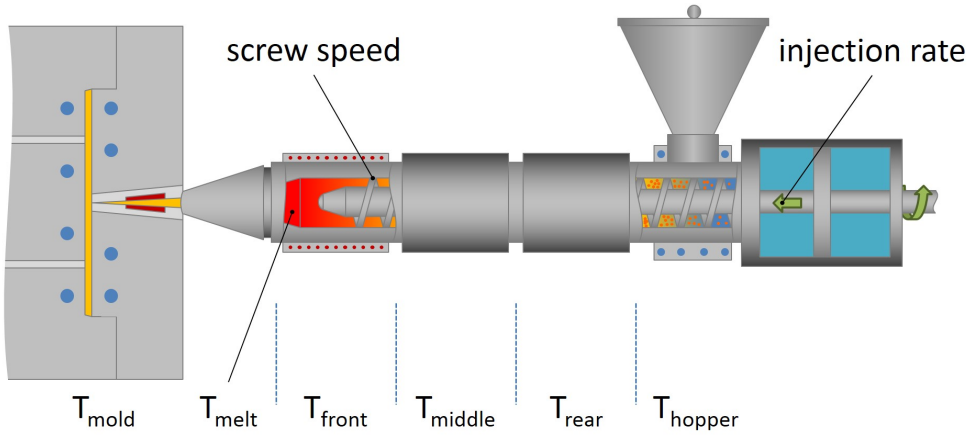
## Regulatory Status

For regulatory compliance information, see *Polyflam* RMMB 40400 GRY6-3411 Product Stewardship Bulletin (PSB) and Safety Data Sheet (SDS).

| | |
|---|---|
| **Status** | Commercial: Active |
| **Availability** | Africa-Middle East; Asia-Pacific; Europe; Latin America; North America |
| **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 |
|---|---|---|---|
| **Physical** | | | |
| Melt Volume Flow Rate, (260 °C/5.0 kg) | 28 | cm³/10 min | ISO 1133 |
| Density, (Method A) | 1.18 | g/cm³ | ISO 1183 |
| **Mechanical** | | | |
| 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 |
| **Impact** | | | |
| Charpy Impact Strength - Notched | | | |
| (23 °C, Type 1, Edgewise, Notch A) | 63 | kJ/m² | ISO 179 |
| (-30 °C, Type 1, Edgewise, Notch A) | 21 | kJ/m² | ISO 179 |
| Charpy Impact Strength - Unnotched | | | |
| (23 °C, Type 1, Edgewise) | No Break | | ISO 179 |
| (-30 °C, Type 1, Edgewise) | No Break | | ISO 179 |
| **Hardness** | | | |
| Ball Pressure Test, (105 °C) | Pass | | IEC 60695-10-2 |
| **Thermal** | | | |
| 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 |
| **Electrical** | | | |
| 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 |
| **Flammable** | | | |
| Hot-wire Ignition (HWI) | | | UL 746A |
| Burning Rate | | | |
| (2.00 mm, Self-Extinguishing) | 0.0 | mm/min | FMVSS 302 |
| (2.00 mm, Self-Extinguishing) | 0.0 | mm/min | ISO 3795 |
| 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 |
| **UL Information** | | | |
| 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 | | |




| Injection Parameters | Nominal Value | Units |
|---|---|---|
| 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 |

## Notes

These are typical property values not to be construed as specification limits.

## Processing notes

Melt contacting surfaces should be made of a high quality, corrosive resistant steel. Positive experiences have been made with steel qualities containing > 12% chromium.

Avoid processing at very barrel high temperatures or above the recommended melt temperature range as this can increase risk of deposit onto the tool surfaces. Avoid long residence times. At start and end of production, it is recommended to purge clean with non-flame retardant polymer or a polyolefin.

## Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

## Company Information

For further information regarding the LyondellBasell company, please visit http://www.lyb.com/.



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