

Technical Data Sheet

## Polyflam RMMK 125

Acrylonitrile Butadiene Styrene + PA  
LyondellBasell Industries  
Engineering Plastics

### Product Description

Flame-retardant ABS/PA blend; without PBDE; high stress crack resistance

### General

|                   |                     |                                    |
|-------------------|---------------------|------------------------------------|
| Features          | • Flame Retardant   | • High ESCR (Stress Crack Resist.) |
| UL File Number    | • E86615            |                                    |
| Processing Method | • Injection Molding |                                    |

| Physical | Dry  | Conditioned | Unit              | Test Method |
|----------|------|-------------|-------------------|-------------|
| Density  | 1.30 | --          | g/cm <sup>3</sup> | ISO 1183/A  |

|                                            |    |    |                        |          |
|--------------------------------------------|----|----|------------------------|----------|
| Melt Volume-Flow Rate (MVR) (250°C/5.0 Kg) | 12 | -- | cm <sup>3</sup> /10min | ISO 1133 |
|--------------------------------------------|----|----|------------------------|----------|

| Mechanical             | Dry              | Conditioned     | Unit         | Test Method     |
|------------------------|------------------|-----------------|--------------|-----------------|
| Tensile Modulus        | 363000<br>(2500) | 136000<br>(940) | psi<br>(MPa) | ISO 527-1/1A/1  |
| Tensile Stress (Yield) | 7540<br>(52.0)   | 4210<br>(29.0)  | psi<br>(MPa) | ISO 527-2/1A/50 |
| Tensile Strain (Yield) | 3.0              | 16              | %            | ISO 527-2/1A/50 |

| Impact                           | Dry          | Conditioned | Unit                                          | Test Method |
|----------------------------------|--------------|-------------|-----------------------------------------------|-------------|
| Charpy Notched Impact Strength   |              |             |                                               | ISO 179/1eA |
| -22°F (-30°C)                    | 4.3<br>(9.0) | --          | ft·lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) |             |
| 73°F (23°C)                      | 5.7<br>(12)  | 10<br>(21)  | ft·lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) |             |
| Charpy Unnotched Impact Strength |              |             |                                               | ISO 179/1eU |
| -22°F (-30°C)                    | No Break     | No Break    |                                               |             |
| 73°F (23°C)                      | No Break     | No Break    |                                               |             |

| Thermal                            | Dry           | Conditioned | Unit       | Test Method    |
|------------------------------------|---------------|-------------|------------|----------------|
| Deflection Temperature Under Load  |               |             |            |                |
| 66 Psi (0.45 Mpa), Unannealed      | 235<br>(113)  | --          | °F<br>(°C) | ISO 75-2/Bf    |
| 264 Psi (1.8 Mpa), Unannealed      | 140<br>(60.0) | --          | °F<br>(°C) | ISO 75-2/Af    |
| Vicat Softening Temperature        |               |             |            |                |
| --                                 | 313<br>(156)  | --          | °F<br>(°C) | ISO 306/B50    |
| --                                 | 374<br>(190)  | --          | °F<br>(°C) | ISO 306/A50    |
| Ball Pressure Test (257°F (125°C)) | Pass          | --          |            | IEC 60695-10-2 |
| RTI Elec                           |               |             |            | UL 746B        |
| 0.06 In (1.5 Mm)                   | 140<br>(60.0) | --          | °F<br>(°C) |                |
| 0.12 In (3.0 Mm)                   | 140<br>(60.0) | --          | °F<br>(°C) |                |

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| Thermal                                 | Dry           | Conditioned | Unit               | Test Method                      |
|-----------------------------------------|---------------|-------------|--------------------|----------------------------------|
| RTI Imp                                 |               |             |                    | UL 746B                          |
| 0.06 In (1.5 Mm)                        | 140<br>(60.0) | --          | °F<br>(°C)         |                                  |
| 0.12 In (3.0 Mm)                        | 140<br>(60.0) | --          | °F<br>(°C)         |                                  |
| RTI Str                                 |               |             |                    | UL 746B                          |
| 0.06 In (1.5 Mm)                        | 140<br>(60.0) | --          | °F<br>(°C)         |                                  |
| 0.12 In (3.0 Mm)                        | 140<br>(60.0) | --          | °F<br>(°C)         |                                  |
| Electrical                              | Dry           | Conditioned | Unit               | Test Method                      |
| Surface Resistivity                     | > 1.0E+15     | --          | ohms               | IEC 60093                        |
| Volume Resistivity                      | > 1.0E+13     | --          | ohms·m             | IEC 62631-3-1                    |
| Comparative Tracking Index              | 200           | --          | V                  | IEC 60112                        |
| Flammability                            | Dry           | Conditioned | Unit               | Test Method                      |
| Burning Rate                            |               |             |                    |                                  |
| 0.0787 In (2.00 Mm), Self-extinguishing | 0.0           | --          | in/min<br>(mm/min) | FMVSS 302                        |
| 0.0787 In (2.00 Mm), Self-extinguishing | 0.0           | --          | in/min<br>(mm/min) | ISO 3795                         |
| Flame Rating                            |               |             |                    | UL 94<br>IEC 60695-11-10,<br>-20 |
| 0.06 In (1.5 Mm)                        | V-0           | --          |                    |                                  |
| 0.12 In (3.0 Mm)                        | V-0           | --          |                    |                                  |
| 0.08 In (2.0 Mm)                        | 5VA           | --          |                    |                                  |
| Glow Wire Flammability Index            |               |             |                    | IEC 60695-2-12                   |
| 0.030 In (0.75 Mm)                      | 1760<br>(960) | --          | °F<br>(°C)         |                                  |
| 0.06 In (1.5 Mm)                        | 1760<br>(960) | --          | °F<br>(°C)         |                                  |
| 0.12 In (3.0 Mm)                        | 1760<br>(960) | --          | °F<br>(°C)         |                                  |
| Glow Wire Ignition Temperature          |               |             |                    | IEC 60695-2-13                   |
| 0.06 In (1.5 Mm)                        | 1380<br>(750) | --          | °F<br>(°C)         |                                  |
| 0.12 In (3.0 Mm)                        | 1380<br>(750) | --          | °F<br>(°C)         |                                  |
| Oxygen Index                            | 31            | --          | %                  | ISO 4589-2                       |

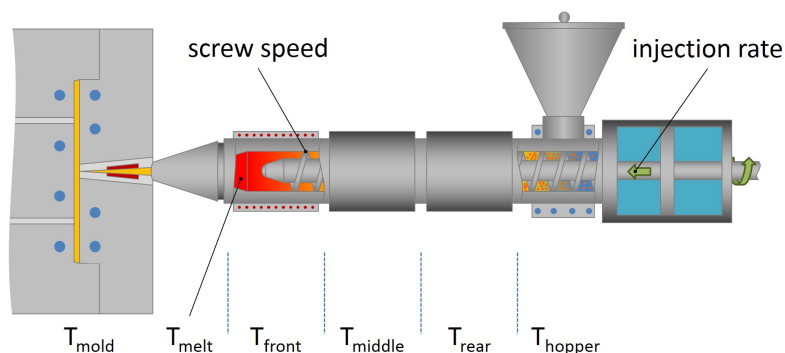
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| Injection              | Dry (English)   | Dry (SI)         |
|------------------------|-----------------|------------------|
| Drying Temperature     | 158 to 176 °F   | 70 to 80 °C      |
| Drying Time            | 4.0 to 6.0 hr   | 4.0 to 6.0 hr    |
| Suggested Max Moisture | 0.04 to 0.10 %  | 0.04 to 0.10 %   |
| Processing (Melt) Temp | 464 to 500 °F   | 240 to 260 °C    |
| Mold Temperature       | 104 to 176 °F   | 40 to 80 °C      |
| Injection Rate         | Slow-Moderate   | Slow-Moderate    |
| Back Pressure          | 725 to 1450 psi | 5.00 to 10.0 MPa |
| Screw Speed            | < 591 in/min    | < 15 m/min       |

### Injection Notes

Mould surface contacting melt should  
be of non-corrosive steel (content of chrome > 12%)

### Notes

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