

# Schuladur A MV 14 SHI FR 1(f1) black 96.8106

Polybutylene Terephthalate

LyondellBasell Industries

Engineering Plastics

## Product Description

PBT flame retardant, high impact, (f1) suitable for outdoor use

## General

|                     |                                                                                        |                                                                                         |
|---------------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Features            | <ul style="list-style-type: none"> <li>Flame Retardant</li> <li>Halogenated</li> </ul> | <ul style="list-style-type: none"> <li>Impact Modified</li> <li>UV Resistant</li> </ul> |
| UL File Number      | E86615                                                                                 |                                                                                         |
| Processing Method   | Injection Molding                                                                      |                                                                                         |
| Resin ID (ISO 1043) | PBT-I FR(17)                                                                           |                                                                                         |

| Physical                                    | Nominal Value (English)    | Nominal Value (SI)         | Test Method |
|---------------------------------------------|----------------------------|----------------------------|-------------|
| Density                                     | 1.36 g/cm <sup>3</sup>     | 1.36 g/cm <sup>3</sup>     | ISO 1183/A  |
| Melt Volume-Flow Rate (MVR) (250°C/2.16 Kg) | 5.0 cm <sup>3</sup> /10min | 5.0 cm <sup>3</sup> /10min | ISO 1133    |

| Mechanical             | Nominal Value (English) | Nominal Value (SI) | Test Method     |
|------------------------|-------------------------|--------------------|-----------------|
| Tensile Modulus        | 305000 psi              | 2100 MPa           | ISO 527-1/1A/1  |
| Tensile Stress (Yield) | 6090 psi                | 42.0 MPa           | ISO 527-2/1A/50 |
| Tensile Strain (Yield) | 3.5 %                   | 3.5 %              | ISO 527-2/1A/50 |

| Impact                           | Nominal Value (English)   | Nominal Value (SI)    | Test Method |
|----------------------------------|---------------------------|-----------------------|-------------|
| Charpy Notched Impact Strength   |                           |                       | ISO 179/1eA |
| -22°F (-30°C)                    | 2.9 ft·lb/in <sup>2</sup> | 6.0 kJ/m <sup>2</sup> |             |
| 73°F (23°C)                      | 5.7 ft·lb/in <sup>2</sup> | 12 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                            | Nominal Value (English) | Nominal Value (SI) | Test Method    |
|------------------------------------|-------------------------|--------------------|----------------|
| Deflection Temperature Under Load  |                         |                    |                |
| 66 Psi (0.45 Mpa), Unannealed      | 232 °F                  | 111 °C             | ISO 75-2/Bf    |
| 264 Psi (1.8 Mpa), Unannealed      | 131 °F                  | 55.0 °C            | ISO 75-2/Af    |
| Vicat Softening Temperature        |                         |                    |                |
| --                                 | 259 °F                  | 126 °C             | ISO 306/B50    |
| --                                 | 412 °F                  | 211 °C             | ISO 306/A50    |
| Ball Pressure Test (257°F (125°C)) | Pass                    | Pass               | IEC 60695-10-2 |

| Electrical                               | Nominal Value (English) | Nominal Value (SI) | Test Method |
|------------------------------------------|-------------------------|--------------------|-------------|
| Electric Strength <sup>1</sup>           |                         |                    | IEC 60243-1 |
| 73°F (23°C), 0.0394 In (1.00 Mm), In Oil | 790 V/mil               | 31 kV/mm           |             |
| Comparative Tracking Index               | 200 V                   | 200 V              | IEC 60112   |

| Flammability                            | Nominal Value (English) | Nominal Value (SI) | Test Method          |
|-----------------------------------------|-------------------------|--------------------|----------------------|
| Burning Rate                            |                         |                    |                      |
| 0.0787 In (2.00 Mm), Self-extinguishing | 0.0 in/min              | 0.0 mm/min         | FMVSS 302            |
| 0.0787 In (2.00 Mm), Self-extinguishing | 0.0 in/min              | 0.0 mm/min         | ISO 3795             |
| Flammability Classification             |                         |                    | IEC 60695-11-10, -20 |
| 0.030 In (0.75 Mm)                      | V-0                     | V-0                |                      |
| 0.06 In (1.5 Mm)                        | V-0                     | V-0                |                      |
| 0.12 In (3.0 Mm)                        | V-0                     | V-0                |                      |



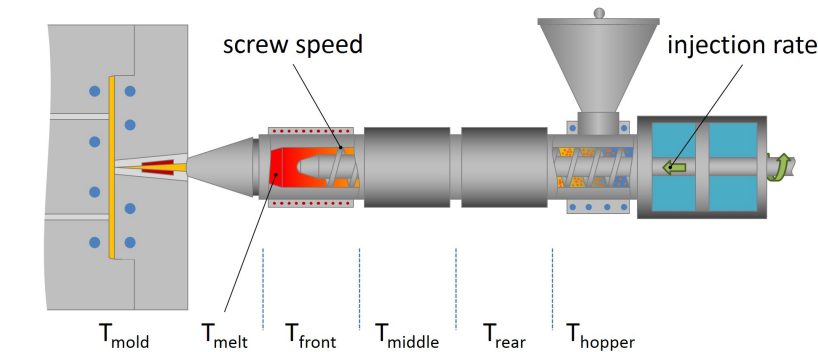
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| Flammability                   | Nominal Value (English) | Nominal Value (SI) | Test Method    |
|--------------------------------|-------------------------|--------------------|----------------|
| Glow Wire Flammability Index   |                         |                    | IEC 60695-2-12 |
| 0.030 In (0.75 Mm)             | 1760 °F                 | 960 °C             |                |
| 0.06 In (1.5 Mm)               | 1760 °F                 | 960 °C             |                |
| 0.12 In (3.0 Mm)               | 1760 °F                 | 960 °C             |                |
| Glow Wire Ignition Temperature |                         |                    | IEC 60695-2-13 |
| 0.030 In (0.75 Mm)             | 1290 °F                 | 700 °C             |                |
| 0.06 In (1.5 Mm)               | 1290 °F                 | 700 °C             |                |
| 0.12 In (3.0 Mm)               | 1290 °F                 | 700 °C             |                |

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| Injection              | Nominal Value (English) | Nominal Value (SI) |
|------------------------|-------------------------|--------------------|
| Drying Temperature     | 248 °F                  | 120 °C             |
| Drying Time            | 2.0 to 4.0 hr           | 2.0 to 4.0 hr      |
| Suggested Max Moisture | 0.02 %                  | 0.02 %             |
| Processing (Melt) Temp | 482 to 500 °F           | 250 to 260 °C      |
| Mold Temperature       | 158 to 194 °F           | 70 to 90 °C        |
| Injection Rate         | Slow-Moderate           | Slow-Moderate      |
| 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

<sup>1</sup> 2000 V/sec

Notes

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