

## Ronfalin ABS 1412 GF 20

Acrylonitrile Butadiene Styrene

LyondellBasell Industries

Engineering Plastics

### Product Description

20% glass fiber reinforced ABS compound. (Former name: POLYMAN FABS 20GF)

### General

|                        |                                     |
|------------------------|-------------------------------------|
| Filler / Reinforcement | • Glass Fiber, 20% Filler by Weight |
| Processing Method      | • Injection Molding                 |

| Physical                                    | Nominal Value (English)   | Nominal Value (SI)        | Test Method    |
|---------------------------------------------|---------------------------|---------------------------|----------------|
| Density                                     | 1.18 g/cm <sup>3</sup>    | 1.18 g/cm <sup>3</sup>    | ISO 1183/A     |
| Melt Volume-Flow Rate (MVR) (220°C/10.0 Kg) | 12 cm <sup>3</sup> /10min | 12 cm <sup>3</sup> /10min | ISO 1133       |
| Mechanical                                  | Nominal Value (English)   | Nominal Value (SI)        | Test Method    |
| Tensile Modulus                             | 899000 psi                | 6200 MPa                  | ISO 527-1/1A/1 |
| Tensile Stress (Break)                      | 11000 psi                 | 76.0 MPa                  | ISO 527-2/1A/5 |
| Tensile Strain (Break)                      | 1.8 %                     | 1.8 %                     | ISO 527-2/5    |
| Flexural Modulus <sup>1</sup>               | 943000 psi                | 6500 MPa                  | ISO 178        |
| Flexural Stress                             |                           |                           | ISO 178        |
| 2.2% Strain <sup>1</sup>                    | 17400 psi                 | 120 MPa                   |                |
| 2.2% Strain <sup>2, 3</sup>                 | 16000 psi                 | 110 MPa                   |                |
| 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)                                 | 3.3 ft·lb/in <sup>2</sup> | 7.0 kJ/m <sup>2</sup>     |                |
| Charpy Unnotched Impact Strength            |                           |                           | ISO 179/1eU    |
| -22°F (-30°C)                               | 10 ft·lb/in <sup>2</sup>  | 22 kJ/m <sup>2</sup>      |                |
| 73°F (23°C)                                 | 10 ft·lb/in <sup>2</sup>  | 21 kJ/m <sup>2</sup>      |                |
| Hardness                                    | Nominal Value (English)   | Nominal Value (SI)        | Test Method    |
| Ball Indentation Hardness (H 358/30)        | 21300 psi                 | 147 MPa                   | ISO 2039-1     |
| Thermal                                     | Nominal Value (English)   | Nominal Value (SI)        | Test Method    |
| Deflection Temperature Under Load           |                           |                           |                |
| 66 Psi (0.45 Mpa), Unannealed               | 214 °F                    | 101 °C                    | ISO 75-2/Bf    |
| 264 Psi (1.8 Mpa), Unannealed               | 203 °F                    | 95.0 °C                   | ISO 75-2/Af    |
| Vicat Softening Temperature                 |                           |                           |                |
| --                                          | 216 °F                    | 102 °C                    | ISO 306/B50    |
| --                                          | 226 °F                    | 108 °C                    | ISO 306/A50    |
| Electrical                                  | Nominal Value (English)   | Nominal Value (SI)        | Test Method    |
| Surface Resistivity                         | 1.0E+14 ohms              | 1.0E+14 ohms              | IEC 60093      |
| Volume Resistivity                          | 1.0E+15 ohms·m            | 1.0E+15 ohms·m            | IEC 62631-3-1  |
| Comparative Tracking Index (Solution A)     | 600 V                     | 600 V                     | IEC 60112      |

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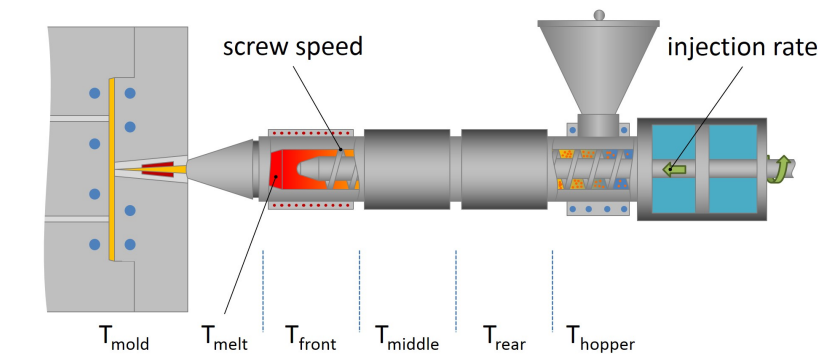
| Flammability                   | Nominal Value (English) | Nominal Value (SI) | Test Method          |
|--------------------------------|-------------------------|--------------------|----------------------|
| Burning Rate                   |                         |                    |                      |
| 0.0787 In (2.00 Mm)            | < 3.9 in/min            | < 100 mm/min       | ISO 3795             |
| 0.0787 In (2.00 Mm)            | < 3.9 in/min            | < 100 mm/min       | FMVSS 302            |
| Flammability Classification    |                         |                    | IEC 60695-11-10, -20 |
| 0.06 In (1.6 Mm)               | HB                      | HB                 |                      |
| 0.13 In (3.2 Mm)               | HB                      | HB                 |                      |
| Glow Wire Ignition Temperature |                         |                    | IEC 60695-2-13       |
| 0.06 In (1.5 Mm)               | 1290 °F                 | 700 °C             |                      |
| 0.12 In (3.0 Mm)               | 1290 °F                 | 700 °C             |                      |

### Additional Information

- 1.) Not for use in food contact applications
- 2.) Not for use in medical or pharmaceutical applications

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| Injection              | Nominal Value (English) | Nominal Value (SI) |
|------------------------|-------------------------|--------------------|
| Drying Temperature     | 176 °F                  | 80 °C              |
| Drying Time            | 2.0 to 4.0 hr           | 2.0 to 4.0 hr      |
| Processing (Melt) Temp | 446 to 482 °F           | 230 to 250 °C      |
| Mold Temperature       | 104 to 176 °F           | 40 to 80 °C        |

Notes

- <sup>1</sup> 0.079 in/min (2.0 mm/min)
- <sup>2</sup> 0.091 in/min (2.3 mm/min)
- <sup>3</sup> at Break

Notes

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