

Technical Data Sheet

# RONFALIN® ABS 1344 FC

Acrylonitrile Butadiene Styrene  
Engineering Plastics

## Product Description

High impact grade with food contact (FC) approval. (Former name: POLYMAN ABS M/TK HI)

## General

|                   |                            |
|-------------------|----------------------------|
| Features          | • Medium Impact Resistance |
| Processing Method | • Injection Molding        |

| Physical                                    | Nominal Value (English)   | Nominal Value (SI)        | Test Method |
|---------------------------------------------|---------------------------|---------------------------|-------------|
| Density                                     | 1.04 g/cm <sup>3</sup>    | 1.04 g/cm <sup>3</sup>    | ISO 1183/A  |
| Melt Volume-Flow Rate (MVR) (220°C/10.0 kg) | 21 cm <sup>3</sup> /10min | 21 cm <sup>3</sup> /10min | ISO 1133    |
| Molding Shrinkage                           | 0.40 to 0.70 %            | 0.40 to 0.70 %            | ISO 294-4   |

| Mechanical             | Nominal Value (English) | Nominal Value (SI) | Test Method     |
|------------------------|-------------------------|--------------------|-----------------|
| Tensile Modulus        | 334000 psi              | 2300 MPa           | ISO 527-2/1A/1  |
| Tensile Stress (Yield) | 6240 psi                | 43.0 MPa           | ISO 527-2/1A/50 |
| Tensile Strain (Yield) | 2.4 %                   | 2.4 %              | 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)                    | 5.2 ft·lb/in <sup>2</sup> | 11 kJ/m <sup>2</sup> |             |
| 73°F (23°C)                      | 10 ft·lb/in <sup>2</sup>  | 21 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             |             |

| Hardness                             | Nominal Value (English) | Nominal Value (SI) | Test Method |
|--------------------------------------|-------------------------|--------------------|-------------|
| Ball Indentation Hardness (H 358/30) | 15100 psi               | 104 MPa            | ISO 2039-1  |

| Thermal                       | Nominal Value (English) | Nominal Value (SI) | Test Method |
|-------------------------------|-------------------------|--------------------|-------------|
| Heat Deflection Temperature   |                         |                    |             |
| 66 psi (0.45 MPa), Unannealed | 189 °F                  | 87.0 °C            | ISO 75-2/Bf |
| 264 psi (1.8 MPa), Unannealed | 165 °F                  | 74.0 °C            | ISO 75-2/Af |
| Vicat Softening Temperature   |                         |                    |             |
| --                            | 221 °F                  | 105 °C             | ISO 306/A50 |
| --                            | 205 °F                  | 96.0 °C            | ISO 306/B50 |

| Electrical                 | Nominal Value (English) | Nominal Value (SI) | Test Method   |
|----------------------------|-------------------------|--------------------|---------------|
| Surface Resistivity        | > 1.0E+15 ohms          | > 1.0E+15 ohms     | IEC 60093     |
| Volume Resistivity         | > 1.0E+13 ohms·m        | > 1.0E+13 ohms·m   | IEC 62631-3-1 |
| Comparative Tracking Index | 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)            | 1.4 in/min              | 36 mm/min          | ISO 3795             |
| 0.0787 in (2.00 mm)            | 1.4 in/min              | 36 mm/min          | FMVSS 302            |
| Flammability Classification    |                         |                    | IEC 60695-11-10, -20 |
| 0.06 in (1.5 mm)               | HB                      | HB                 |                      |
| 0.12 in (3.0 mm)               | HB                      | HB                 |                      |
| Glow Wire Flammability Index   |                         |                    | IEC 60695-2-12       |
| 0.06 in (1.5 mm)               | 1200 °F                 | 650 °C             |                      |
| 0.12 in (3.0 mm)               | 1200 °F                 | 650 °C             |                      |
| Glow Wire Ignition Temperature |                         |                    | IEC 60695-2-13       |
| 0.06 in (1.5 mm)               | 1250 °F                 | 675 °C             |                      |
| 0.12 in (3.0 mm)               | 1250 °F                 | 675 °C             |                      |

## Additional Information

ABS can normally be left in the cylinder. If in doubt purge with polyolefin  
Finishing

"ABS is suitable for machining. Varnishing, printing, gluing and embossing can  
be carried out using commercially available products.

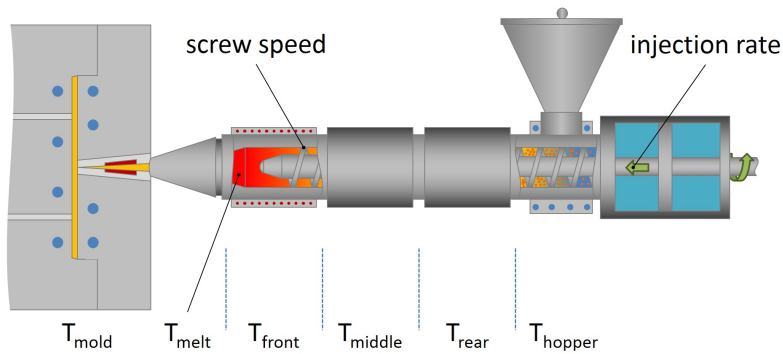
Electroplating is affected by rubber type and content as well moulded in stress  
and orientation. Use of special electroplating types is recommended for  
optimum adhesion.

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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      |
| Drying Time, Maximum   | 12 hr                   | 12 hr              |
| Suggested Max Moisture | 0.00 to 0.10 %          | 0.00 to 0.10 %     |
| Suggested Max Regrind  | 30 %                    | 30 %               |
| Hopper Temperature     | 122 °F                  | 50 °C              |
| Rear Temperature       | 356 to 410 °F           | 180 to 210 °C      |
| Middle Temperature     | 401 to 455 °F           | 205 to 235 °C      |
| Front Temperature      | 446 to 500 °F           | 230 to 260 °C      |
| Processing (Melt) Temp | 446 to 500 °F           | 230 to 260 °C      |
| Mold Temperature       | 104 to 176 °F           | 40 to 80 °C        |
| Back Pressure          | 725 to 2180 psi         | 5.00 to 15.0 MPa   |
| Cushion                | 0.0787 to 0.197 in      | 2.00 to 5.00 mm    |
| Screw Speed            | 1.6 ft/sec              | 30 m/min           |

## Notes

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