



# Wellamid® ENGINEERING RESIN

## Wellamid® GF33A099-HRBK

*Glass Fiber Reinforced, Hydrolysis Resistant Nylon Resin (PA66)*

| Property               | ISO         | Metric            | Standard     |                        |               |
|------------------------|-------------|-------------------|--------------|------------------------|---------------|
|                        | Test Method | Units             | Value        | Units                  | Value         |
| Tensile Strength       | 527-93      | MPa               | <b>180</b>   | psi*                   | <b>26,100</b> |
| Tensile Elongation     | 527-93      | %                 | <b>3</b>     | %                      | <b>3</b>      |
| Flexural Modulus       | 178-93      | MPa               | <b>9,600</b> | psi*(10 <sup>5</sup> ) | <b>13.9</b>   |
| Flexural Strength      | 178-93      | MPa               | <b>255</b>   | psi*                   | <b>37,000</b> |
| Izod Impact            | 180-93      | kJ/m <sup>2</sup> | <b>9</b>     | ft-lbs/in*             | <b>1.7</b>    |
| HDT @ 264 psi          | 75-93       | °C                | <b>250</b>   | °F                     | <b>480</b>    |
| Density                | 1183-87     | g/cc              | <b>1.39</b>  | g/cc                   | <b>1.39</b>   |
| Melting Point          | 3146        | °C                | <b>260</b>   | °F                     | <b>500</b>    |
| Shrinkage – Flow       | DIS 294-4   | %                 | <b>0.5</b>   | %                      | <b>0.5</b>    |
| Shrinkage – Transverse | DIS 294-4   | %                 | <b>1.1</b>   | %                      | <b>1.1</b>    |
| Flammability           | UL-94       |                   | -            |                        | -             |
| Filler Content         | 3451-4      | %                 | <b>33</b>    | %                      | <b>33</b>     |

Note: This is typical data obtained from injection molded test bars, tested dry as molded at 73°F (23°C).

Pigments, colorants and other additives may affect certain properties; customers should verify actual properties when considering applications. The data listed here fall in the normal range of product properties but it should not be used to establish specification limits or used alone as the basis for design.

Information herein is based upon Wellman laboratory testing under ideal, controlled testing conditions. It is not intended as a representation of fact or warranty of any kind. Buyers must make their own representative tests and assume all risks of use whether used alone or in combination with other products. Wellman does not assume any obligation or liability whatsoever for use of the information or product except that it will replace product proven to be defective before shipment which shall be the buyers' exclusive remedy. All warranties, expressed or implied, including warranties of merchantability and fitness for a particular purpose of use, are excluded and disclaimed. Wellman assumes no liability for product in infringement of any patent.

The foregoing limitation of remedy and exclusion of liability is reflected in and is part of the consideration for the price at which the products are sold by Wellman.

\*\* Rounded conversions of Metric Units \*\*

1 MPa = 145 PSI

5.25 kJ/m<sup>2</sup> = 1 ft-lbs/in

**For more information call our Customer Service - Toll Free: 1 (800) 821-6022**