

# Rilsan® MB 3000

Polyamide 11

Arkema

Message:

Rilsan® MB 3000 is a Polyamide 11 (Nylon 11) product filled with filler. It can be processed by injection molding and is available in Africa & Middle East, Asia Pacific, Europe, Latin America, or North America.

Characteristics include:

- Flame Retardant
- Eco-Friendly/Green
- Good UV Resistance
- Heat Resistant
- Lubricated

| General Information                      |                                             |             |                        |                        |
|------------------------------------------|---------------------------------------------|-------------|------------------------|------------------------|
| UL YellowCard                            | E45228-101749668                            |             |                        |                        |
| Filler / Reinforcement                   | Filler                                      |             |                        |                        |
| Additive                                 | Flame Retardant                             |             |                        |                        |
|                                          | Lubricant                                   |             |                        |                        |
| Features                                 | Flame Retardant                             |             |                        |                        |
|                                          | Good UV Resistance                          |             |                        |                        |
|                                          | High Heat Resistance                        |             |                        |                        |
|                                          | Lubricated                                  |             |                        |                        |
|                                          | Renewable Resource Content                  |             |                        |                        |
| Forms                                    | Pellets                                     |             |                        |                        |
| Processing Method                        | Injection Molding                           |             |                        |                        |
| Multi-Point Data                         | Isothermal Stress vs. Strain (ISO 11403-1)  |             |                        |                        |
|                                          | Secant Modulus vs. Strain (ISO 11403-1)     |             |                        |                        |
|                                          | Shear Modulus vs. Temperature (ISO 11403-1) |             |                        |                        |
|                                          | Viscosity vs. Shear Rate (ISO 11403-2)      |             |                        |                        |
| Physical                                 | Dry                                         | Conditioned | Unit                   | Test Method            |
| Density                                  | 1080                                        | 1080        | kg/m <sup>3</sup>      | ISO 1183 <sup>1</sup>  |
| Melt volume-flow rate<br>(235°C/2.16 kg) | 95.0                                        | --          | cm <sup>3</sup> /10min | ISO 1133 <sup>2</sup>  |
| Water Absorption                         |                                             |             |                        | ISO 62 <sup>3</sup>    |
| Saturation                               | 2.0                                         | --          | %                      |                        |
| Equilibrium                              | 0.60                                        | --          | %                      |                        |
| Mechanical                               | Dry                                         | Conditioned | Unit                   | Test Method            |
| Tensile modulus                          | 2070                                        | 1920        | MPa                    | ISO 527-2 <sup>4</sup> |
| Tensile Stress (Yield)                   | 51.0                                        | 48.0        | MPa                    | ISO 527-2 <sup>5</sup> |
| Tensile Strain (Yield)                   | 5.0                                         | 5.0         | %                      | ISO 527-2 <sup>6</sup> |

|                                                |                                                                           |             |                   |                           |
|------------------------------------------------|---------------------------------------------------------------------------|-------------|-------------------|---------------------------|
| Nominal strain at break                        | > 50                                                                      | > 50        | %                 | ISO 527-2 <sup>7</sup>    |
| Impact                                         | Dry                                                                       | Conditioned | Unit              | Test Method               |
| Charpy notched impact strength                 |                                                                           |             |                   | ISO 179/1eA <sup>8</sup>  |
| -30°C                                          | 4.00                                                                      | 5.00        | kJ/m <sup>2</sup> |                           |
| 23°C                                           | 4.00                                                                      | 5.00        | kJ/m <sup>2</sup> |                           |
| Charpy impact strength                         |                                                                           |             |                   | ISO 179/1eU <sup>9</sup>  |
| -30°C                                          | 8.50                                                                      | --          | kJ/m <sup>2</sup> |                           |
| 23°C                                           | --                                                                        | No Break    |                   |                           |
| Thermal                                        | Dry                                                                       | Conditioned | Unit              | Test Method               |
| Melting Temperature <sup>10</sup>              | 189                                                                       | --          | °C                | ISO 11357-3 <sup>11</sup> |
| CLTE - Flow                                    | 1.0E-4                                                                    | --          | cm/cm/°C          | ISO 11359-2 <sup>12</sup> |
| Electrical                                     | Dry                                                                       | Conditioned | Unit              | Test Method               |
| Surface resistivity                            | --                                                                        | > 1.0E+15   | ohms              | IEC 60093 <sup>13</sup>   |
| Volume resistivity                             | > 1.0E+13                                                                 | > 1.0E+13   | ohms·m            | IEC 60093 <sup>14</sup>   |
| Electric strength                              | 28                                                                        | 28          | kV/mm             | IEC 60243-1 <sup>15</sup> |
| Relative Permittivity                          |                                                                           |             |                   | IEC 60250 <sup>16</sup>   |
| 100 Hz                                         | 3.00                                                                      | --          |                   |                           |
| 1 MHz                                          | 3.00                                                                      | --          |                   |                           |
| Dissipation Factor                             |                                                                           |             |                   | IEC 60250 <sup>17</sup>   |
| 100 Hz                                         | 0.022                                                                     | --          |                   |                           |
| 1 MHz                                          | 0.018                                                                     | --          |                   |                           |
| Comparative tracking index                     | --                                                                        | 600         |                   | IEC 60112 <sup>18</sup>   |
| Flammability                                   | Dry                                                                       | Conditioned | Unit              | Test Method               |
| Burning Behav. at 1.6mm nom. thickn. (1.60 mm) | V-0                                                                       | --          |                   | ISO 1210 <sup>19</sup>    |
| Burning Behav. at thickness h (0.800 mm)       | V-0                                                                       | --          |                   | ISO 1210 <sup>20</sup>    |
| Oxygen index                                   | 33                                                                        | --          | %                 | ISO 4589-2 <sup>21</sup>  |
| NOTE                                           |                                                                           |             |                   |                           |
| 1.                                             | Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted. |             |                   |                           |
| 2.                                             | Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted. |             |                   |                           |
| 3.                                             | Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted. |             |                   |                           |
| 4.                                             | Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted. |             |                   |                           |
| 5.                                             | Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted. |             |                   |                           |

|     |                                                                           |
|-----|---------------------------------------------------------------------------|
| 6.  | Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted. |
| 7.  | Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted. |
| 8.  | Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted. |
| 9.  | Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted. |
| 10. | 10 °C/min                                                                 |
| 11. | Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted. |
| 12. | Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted. |
| 13. | Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted. |
| 14. | Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted. |
| 15. | Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted. |
| 16. | Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted. |
| 17. | Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted. |
| 18. | Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted. |
| 19. | Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted. |
| 20. | Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted. |
| 21. | Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted. |

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