

# Amilan™ CM1061

## Nylon 6

### TECHNICAL DATA

#### Product Description

High viscosity

#### Uses

- Automotive Applications
- Bottles
- Tanks
- Blow Molding Applications
- Fuel Lines
- Tubing

#### Processing Method

- Blow Molding

#### ISO Designation

- >PA6<

#### Type

- Nylon6/Blow molding

#### ASTM & ISO Properties

| Physical                                | Dry    | Water Absorption | Unit                     | Test Method |
|-----------------------------------------|--------|------------------|--------------------------|-------------|
| Density (23°C)                          | 1.13   | --               | g/cm³                    | ISO 1183    |
| Water Absorption <sup>1</sup>           |        |                  |                          | ISO 62      |
| 24 hr, 23°C                             | 1.8    | --               | %                        |             |
| Saturation, 23°C                        | 10.5   | --               | %                        |             |
| Mechanical                              | Dry    | Water Absorption | Unit                     | Test Method |
| Tensile Strength                        |        |                  |                          | ISO 527-2   |
| -40°C                                   | 110    | 100              | MPa                      |             |
| 23°C                                    | 80     | 35               | MPa                      |             |
| 80°C                                    | 30     | 20               | MPa                      |             |
| Tensile Strain                          |        |                  |                          | ISO 527-2   |
| Break, -40°C                            | 3.0    | 3.0              | %                        |             |
| Break, 23°C                             | > 40   | > 50             | %                        |             |
| Break, 80°C                             | > 50   | > 50             | %                        |             |
| Flexural Modulus (23°C)                 | 2600   | 800              | MPa                      | ISO 178     |
| Flexural Stress (23°C)                  | 100    | 40               | MPa                      | ISO 178     |
| Taber Abrasion Resistance               |        |                  |                          | ISO 9352    |
| 1000 Cycles                             | 3 to 4 | --               | mg                       |             |
| Impact                                  | Dry    | Water Absorption | Unit                     | Test Method |
| Charpy Unnotched Impact Strength        |        |                  |                          | ISO 179     |
| 23°C                                    | 6.0    | 42.0             | kJ/m²                    |             |
| Hardness                                | Dry    | Water Absorption | Unit                     | Test Method |
| Rockwell Hardness                       |        |                  |                          | ISO 2039-2  |
| R-Scale, 23°C                           | 119    | --               |                          |             |
| Thermal                                 | Dry    | Water Absorption | Unit                     | Test Method |
| Deflection Temperature Under Load       |        |                  |                          |             |
| 0.45 MPa, Unannealed                    | 182    | --               | °C                       | ISO 75-2/B  |
| 1.8 MPa, Unannealed                     | 65     | --               | °C                       | ISO 75-2/A  |
| Melting Temperature                     | 225    | --               | °C                       | DSC         |
| Coefficient of Linear Thermal Expansion | 8      | --               | cm <sup>3</sup> -5/cm/°C | ISO 11359-2 |

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| Electrical                          | Dry                                    | Water Absorption  | Unit   | Test Method |
|-------------------------------------|----------------------------------------|-------------------|--------|-------------|
| Volume Resistivity                  | 1.0E+12 to 1.0E+13                     | 1.0E+9 to 1.0E+10 | ohms·m | IEC 60093   |
| Electric Strength                   | 20                                     | --                | kV/mm  | IEC 60243-1 |
| Dielectric Constant<br>23°C, 1 MHz  | 3.4                                    | 4.5               |        | IEC 60250   |
| Dissipation Factor<br>(23°C, 1 MHz) | 0.030                                  | 0.130             |        | IEC 60250   |
| <b>Additional Information</b>       |                                        |                   |        |             |
| Dry                                 | Water absorption Moisture Content 3.5% |                   |        |             |

#### Notes

<sup>1</sup> in water

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