

**PRODUCT INFORMATION**

Standard Grade

**KOPA<sup>®</sup> KN181D**

Polyamide 6 resin

| Property                               |  | Test Method | Units                       | Value     |
|--|--|-------------|-----------------------------|-----------|
| <b>General</b>                         |  |             |                             |           |
| Relative viscosity                     |  | 96% H2SO4   | -                           | 2.63±0.04 |
| Moisture content                       |  | -           | %                           | 0.1 max   |
| Monomer content                        |  | -           | %                           | 0.8 max   |
| Color                                  | L  | -           | -                           | 74±4.0    |
| Color                                  | b  | -           | -                           | -1.8± 2.0 |
| Amino end group                        |  | -           | meq/kg                      | 52±10.0   |
| <b>Physical</b>                        |  |             |                             |           |
| Specific Gravity                       |  | ASTM D792   | -                           | 1.14      |
| Shrinkage                              |  | ASTM D955   | %                           | 1.3-1.5   |
| Water Absorption                       | 23°C, Equilibrium 60%RH                    | ASTM D570   | %                           | 1.8       |
| <b>Thermal</b>                         |  |             |                             |           |
| Melting Point                          |  | ASTM D3418  | °C                          | 220       |
| Heat Deflection Temperature under Load |  | ASTM D648   |                             |           |
|  | HDT/A 0.45 MPa ( 4.6 kg/cm <sup>2</sup> )  |             | °C                          | 180       |
|  | HDT/A 1.82 MPa ( 18.6 kg/cm <sup>2</sup> ) |             | °C                          | 65        |
| Coeff. Of Linear Thermal Expansion     |  | ASTM D696   | × 10 <sup>-4</sup> cm/cm·°C | 0.8       |
| Flammability                           |  | UL 94       |                             | HB        |
| <b>Mechanical</b>                      |  |             |                             |           |
| Tensile Strength                       | 23°C                                       | ASTM D638   | kg/cm <sup>2</sup>          | 780       |
| Tensile Elongation                     | 23°C                                       | ASTM D638   | %                           | 46        |
| Flexural Strength                      | 23°C                                       | ASTM D790   | kg/cm <sup>2</sup>          | 1,260     |
| Flexural Modulus                       | 23°C                                       | ASTM D790   | kg/cm <sup>2</sup>          | 28,300    |
| Notched Izod Impact Strength           | 23°C                                       | ASTM D256   | kg cm/cm                    | 7.5       |

| <b>Electrical</b>   |           |                    |     |
|---------------------|-----------|--------------------|-----|
| Arc Resistance      | ASTM D495 | sec                | 120 |
| Dielectric Constant | ASTM D150 | 10 <sup>6</sup> Hz | 3.4 |
| Dielectric Strength | ASTM D149 | KV/mm              | 20  |

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