

## Graphene Reinforced Nylon 12

Catlog Number: CRSM-0053

### • Description

Advanced nano-composite utilizing graphene to enhance thermal dissipation and electrical conductivity while maintaining PA12 toughness.

### • Basic Information

Base Material: Polyamide 12

Reinforcement Type: Graphene Nanoplatelets

Reinforcement Volume (%): 0.1

Density (g/cm<sup>3</sup>): 1.05

Tensile Strength (MPa): 72

Tensile Modulus (MPa): 4500

Elongation at Break (%): 6.5

Flexural Strength (MPa): 110

Flexural Modulus (MPa): 4100

Heat Deflection Temp (0.45MPa): 150

Glass Transition Temp (Tg): 45

Melting Point (°C): 178

Thermal Conductivity (W/mK): 1.2

Flame Retardancy (UL94): HB

Surface Resistivity (Ω): 10<sup>4</sup> - 10<sup>6</sup>

Water Absorption (%): 0.45

Printing Temp (°C): 260-290

Bed Temp (°C): 80-100

Chamber Temp (°C): 40-70

Fan Speed (%): 20

Nozzle Type: Hardened Steel

Layer Height (mm): 0.15

Shrinkage Rate (%): 0.4

Continuous Use Temp (°C): 110

Impact Strength (kJ/m<sup>2</sup>): 12

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