



Material for EM-Tec CN carbon fibre reinforced polyamide ESD safe plastic tweezers

The material used for manufacturing the Micro-Tec GN series insulating plastic probes is a Polyamide 66 (Nylon 66) reinforced with 50% glass fibres.

It is used for the following products:

- #52-001056 Micro-Tec GN1 glass fibre reinforced polyamide 66 probe, fine pointed / strong flat
- #52-001057 Micro-Tec GN2 glass fibre reinforced polyamide 66 probe, curved pointed / strong flat
- #52-001058 Micro-Tec GN3 glass fibre reinforced polyamide 66 probe, sharp flat / large flat
- #52-001059 Micro-Tec GNS glass fibre reinforced polyamide 66 probes, set of all three

General remarks:

- GN series is the engineering plastic polyamide 66 (PA66) reinforced with 50% fine glass fibre
- heat stabilised and good heat capacity
- high rigidity, good tensile strength
- high fatigue and creep resistance
- excellent wear and abrasion resistance
- good chemical resistance against oils, grease, fuels and non-polar solvents
- not resistant to strong acids, alkalis, hot water or steam
- insulating
- typical applications include probes, tweezers, tweezers tips and tool handles

Properties of glass fibre reinforced PA66

Mechanical Properties	
Elastic modulus +23°C	16000 MPa
Elastic modulus +60°C	14000 MPa
Elastic modulus +90°C	8000 MPa
Elastic modulus +120°C	5000 MPa
Tensile strength +23°C	220 MPa
Tensile strength +60°C	160 MPa
Tensile strength +90°C	110 MPa
Tensile strength +120°C	85 Mpa
Izod-impact strength (notched) +23°C	140 J/m
Charpy-impact strength (unnotched)	85 kJ/m2



Thermal Properties	
Coefficient of thermal linear expansion	7.0 x 10 ⁻⁵ /°C (20-100°C)
Temp. of defl. under load (1.8 MPa)	235°C
Temp. of defl. under load (0.45 MPa)	255°C
Vicat softening temp. (50°C/h 50N)	250°C
Continuous use (service) temperature	130°C
Maximum service temperature (short)	185°C
Electrical Properties	
Comparative tracking index	500 Volts
Electric strength (2mm)	21.0 kV/mm
Other properties	
Density	1.57 g/cm ³
Water absorption (water 23°C)	0.65%

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