

NIPPON GOKIN FGM

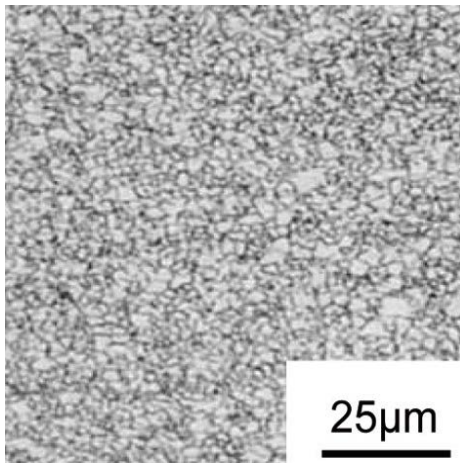
Fine Grain Microstructure
for cutting-edge Stencils



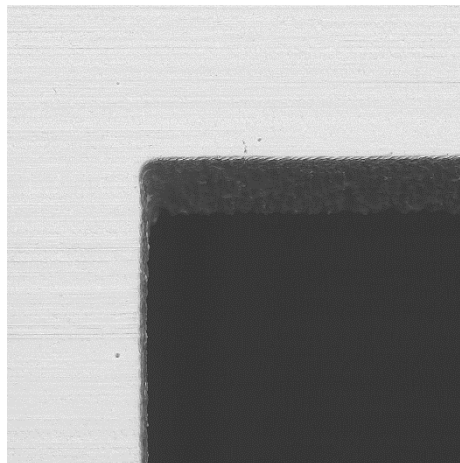
DATASHEET

Chemical Composition

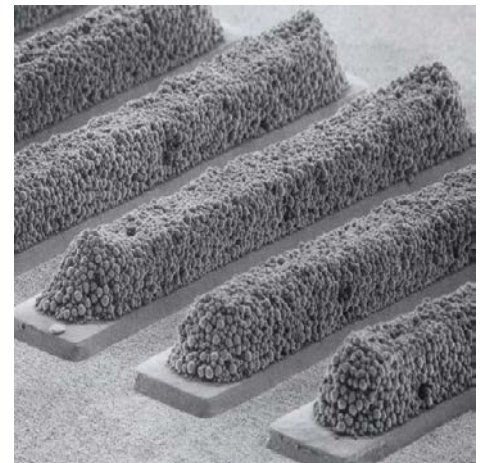
301L % Mass	Carbon (C)	Silicon (Si)	Manganese (Mn)	Phosphorus (P)	Sulfur (S)	Chromium (Cr)	Nickel (Ni)	Nitrogen (N)	Niobium (Nb)	Iron (Fe)
Min	-	-	-	-	-	17.00	6.50	0.10	0.03	Bal
Max	0.03	1.00	2.00	0.04	0.03	18.00	8.00	0.16	0.10	



2µm molecular grain size



Burrless hole walls



Excellent paste release

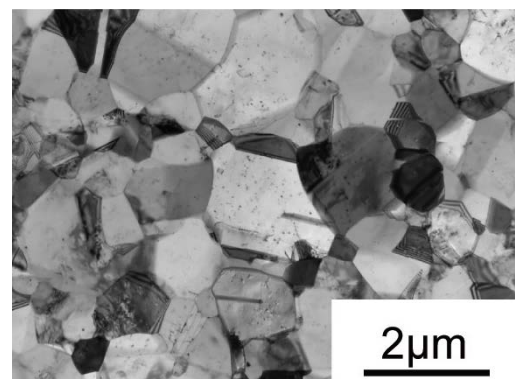
Mechanical Properties

Hardness (HV)	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation (%)	Grain Size (µm)	Available Thickness (mm)	Available Sizes (mm)
≥ 370	≥ 745	≥ 1030	≥ 5	≤ 2	0.080 ~ 0.250 Tolerance: ±4 %	Width: ≤610 ±0.1% Length: Any ±1

Product Brief

Nippon Gokin's FGM alloy is designed for high end stencils used in the SMT and semiconductor applications. This specialised fine grain microstructure stainless steel alloy was created specifically to cater for the needs of the laser & photochemical etching stencil making industry. The finer molecular structure allows for the creation of fine pitch components and high density boards, making it ideal for use in wafer bumping and multi layered stencils.

The finer grain structure of less than 2µm effectively reduces burrs in the manufacturing cycle. This gives fabricators with advanced laser systems the benefit of eliminating timely and costly post polishing processes. FGM also works very well for step stencils as it ensures a stable and smooth finish after etching.



The use of Niobium adds corrosion resistance
& produces a small crystalline size