

Resist Description

Property	SU-8 2000	SU-8 3000
Tone	Negative	Negative
Max Single Coat Thickness, μm	250	100
Aspect Ratio	10:1	5:1
Storage Condition/Life	15-30°C/1 yr	15-30°C/ 1 yr

Film Mechanical Properties*

Property	SU-8 2000	SU-8 3000
Softening point, DMA ($^{\circ}\text{C}$)	210	200
Thermal Stability in Nitrogen, onset/5% weight loss ($^{\circ}\text{C}$)	295/327	277/357
Thermal Stability in Air, onset/5% weight loss ($^{\circ}\text{C}$)	279/311	
Young's Modulus (GPa)	2.0	2.0
Coeff. of Thermal Expansion, CTE (ppm/ $^{\circ}\text{C}$)	52	52
Tensile Strength (MPa)	60	73
Elongation at Break (%)	6.5	4.8
Thermal Conductivity (W/m $^{\circ}\text{K}$)	0.3	0.2

Film Electrical Properties*

Property	SU-8 2000	SU-8 3000
Dielectric Constant, 1 GHz, 50% RH	4.1	3.2
Dielectric loss, 1 GHz	0.015	0.033
Dielectric Strength (V/ μm)	112	115
Volume Resistivity (Ωcm)	2.8×10^{16}	1.8×10^{16}
Surface Resistivity (Ωcm)	1.8×10^{17}	5.1×10^{16}

*All samples hardbaked at 150°C/30 min

Adhesion- Shear Analysis

Substrate	SU-8 2000 (MPa)	SU-8 3000 (MPa)
Si	53	71
SiN	43	73
GaAs	66	78
Ni	45	48
Au	29	47
Al/Cu (99/1)	23	43
Cu	38	80
Cu with AP-300 adhesion promoter	56	-
Glass	poor	23
Glass with HMDS prime	poor	44
Glass/Al ₂ O ₃ with AP-300 adhesion promoter	92	-
Quartz	61	80