

AN3310

Negative Tone

Aqueous Developable Buffer Coat Material

AN 3310 is an advanced buffer coat material incorporating Fujifilm’s proprietary aqueous developable technology.

The material is differentiated by:

- Fast photospeed
- Excellent adhesion
- Good mechanical properties
- High resolution

Applications:

Device buffer coat /protective coat material.

Reduces mechanical, temperature and humidity stresses associated with larger and denser devices.

Provides protection to device surface during assembly and packaging in order to reduce assembly related device failures.

Product Characteristics:

Negative tone, i-line and broadband sensitive

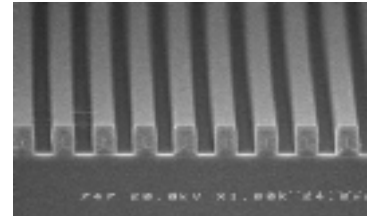
NMP free

Resolution 5 micron fuse window in a 9 micron film

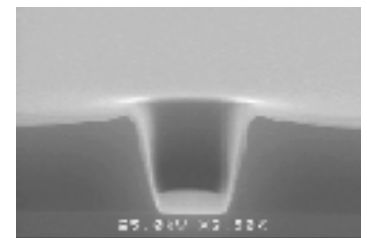
Cured Film Thicknesses from 2 – 10 microns

Self priming resulting in excellent adhesion

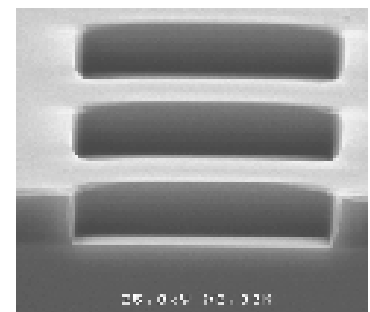
Patterned using standard TMAH photoresist developers



5 μm lines/spaces in 11 μm film



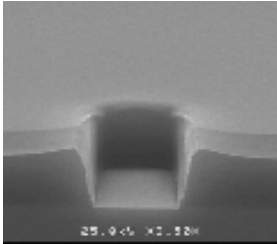
5 μm via in a 7 μm cured film



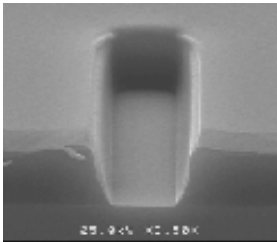
20 μm via in a 9 μm cured film

AN 3310 Exposure Latitude

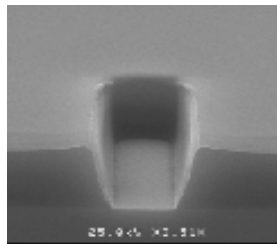
7 μm fuse boxes in 7 μm cured film



110 mJ/cm²



210 mJ/cm²



310 mJ/cm²

AN 3310 Typical Process Summary

	7 micron Process
Softbake Film Thickness	9 μm
Spin Speed (rpm)/Time (sec)	3000/30
Softbake Temp (°C)/ Time (min)	120 °C/4 min
E1:1 i-line (mJ/cm ²)	200 mJ/cm ²
Post Exposure Bake (°C)/ Time (min)	120 °C/3 min
Development with OPD 4262	2x35-40" double puddle
Post Develop Bake (°C)/ Time (min)	150 °C/1 min
After Develop Film Thickness	9 μm
Cure Temp. (°C)/ Time (hr)	350°C/1 hr
Cured Film Thickness	7 μm

Typical Cured Film Properties

Property	Unit	350°C Cure
Tensile Strength at Break	MPa	125
Young's Modulus	GPa	2.2
Tensile Elongation at Break	%	45
Coefficient of Thermal Expansion	ppm/°C	53
Glass Transition Temperature	°C	305
Thermal Decomposition Temperature	°C	475
Moisture Absorption @ 50% RH	%	< 0.5
Dielectric Constant 1MHz; 0%-50%RH		3.0
Dielectric Strength	V/μm	280

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