Microstrip® 3001

Product Description

Fujifilm Electronic Materials' Microstrip® 3001 is a photoresist stripper with improved EH&S properties over conventional NMP or hydroxyl amine based chemistries. Microstrip® 3001 is designed to provide maximum cleaning efficacy for positive photoresist on traditional integration materials.

Microstrip® 3001 can be used with silicon, silicon dioxide, silicon nitride, titanium, tungsten aluminum and its alloys and other metal substrates. It will not stain aluminum, aluminum silicon alloys, titanium or tungsten, even with moisture present.

Microstrip® 3001 provides good bath stability with low evaporation rates, and it is compatible with ultrasonic cleaning systems. Its low viscosity minimizes drag-out losses and typically requires only a DI-water rinse. Trace metals specifications for Microstrip® 3001 are below 20 ppb.

Recommended Process

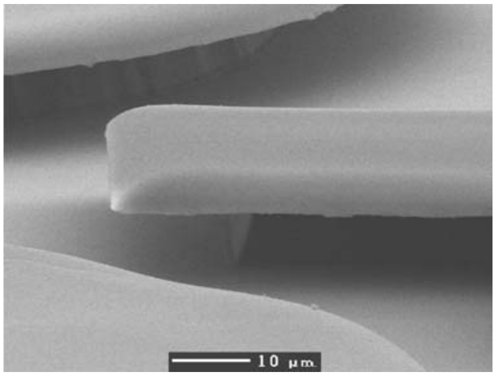
For most process applications, Microstrip® 3001 can be used to strip positive photoresist under standard conditions. Typical process conditions are 10 to 30 min at temperatures between 50°C and 90°C, followed by a DI water rinse.

For wafers that have been subjected to higher hardbake temperatures, deep UV stabilization or high current ion implants elevate the bath temperature to 90°C. If an incomplete strip is observed, the use of an ultrasonic application during the strip process may be necessary.

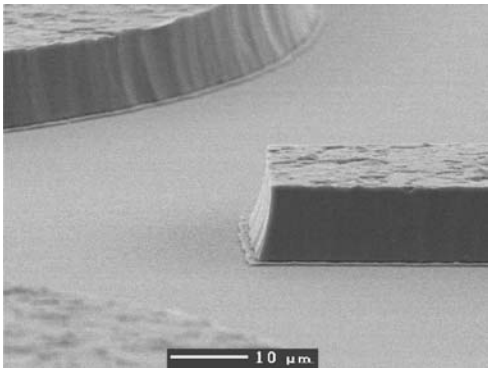
Recommended process flow
(Resist Hardbake from 105°C – 140°C)

1. Heat two baths of Microstrip® 3001 to 70°C ± 5°C.
2. Insert wafers in a carrier and immerse in each bath for 5 to 15 minutes using mild agitation.
3. Rinse in deionized water to 18 MΩcm resistivity.
4. Spin dry.

Note:A strong DI rinse or Quick Dump Rinse is recommended to avoid an excessive metal etching during the DI rinse. As MS3001 is alkaline when mixed with water, an elevated etch rate can be observed during the DI rinse for some metals, including Al and Al alloys. For critical applications an intermediate IPA rinse may be required.



Before Clean



Post Clean
5 minutes at 65°C

Product Data:

Microstrip® 3001 Metal Etch Rates (75°C)

Thickness measurements were made using a CDE ResMap 168 four-point probe

Metal	Etch Rate (Å/minute)
Al	< 1
Ti	< 1
TiN	< 1
TiW	< 1
Ni	< 1
Cu	10
Au	< 1
Ag	2

Microstrip® 3001 Dielectric Compatibility (75°C)

Thickness measurements were made using a Filmetrics F-series FB3B measurement system

Dielectric	Etch Rate (Å/minute)
FSG	< 1
BD1	< 1
Coral	< 1
TEOS	< 1

Microstrip® 3001 Physical Properties

Specific Gravity @ 25°C	1.058
Flash Point (°C) (closed cup)	95
Viscosity @ 25°C (cSt)	5.29
Freezing Point (°C)	< 0
pH (5% solution @ 25°C)	11.0

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