

# TechniStrip® P1331

## Photoresist Stripper



## High/Rapid Dissolution, High Metal Compatibility NMP-Free Stripper

As the semiconductor industry continues to move from plated bumps to small pillars, advanced photolithography materials such as thick spin-on liquid photoresists are frequently used to ensure high resolution. It is critical to the success of these complex technologies to use high-performing photoresist strippers that can provide full dissolution of today's advanced liquid photoresists.

TechniStrip® P1331 offers full dissolution of liquid photoresist while assuring high metal compatibility and ultra-high bath loading compared to conventional TMAH/solvent blend photoresist strippers. With excellent performance on negative and positive tone photoresist, TechniStrip® P1331 can be used on a wide range of thicknesses from 1 – 220 microns.

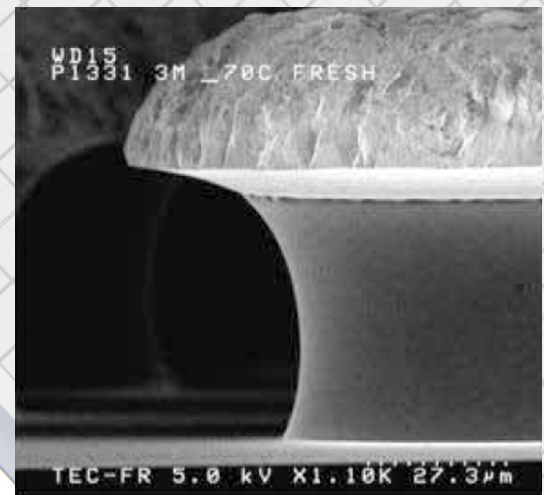
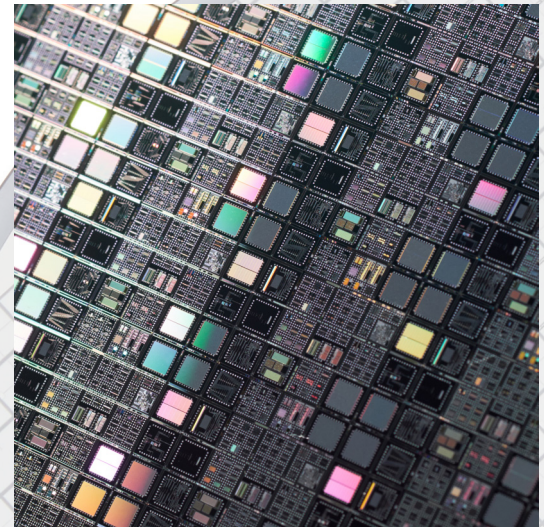
TechniStrip® P1331 is a multipurpose and versatile photoresist remover that is currently used in many applications, including gold bumping, copper pillar, aluminum contact stripping, post-RIE etch/ash, DUV, epoxy molding, debonding, and surface preparation.

### Features

- Full dissolution of conventional spin-on photoresist (N and P tones)
- High substrate compatibility
- Long bath life
- Can be used in a variety of applications
- Direct water rinse
- Suitable for batch (spray or immersion) and single wafer systems

### Benefits

- Reduced cost of operation by higher throughput and higher loading capacity
- Minimized defects on fine-pitch technology by providing full resin/residue dissolution
- High metal compatibility (especially on Al) enabling improved process control and performance for complex architecture metal stacks.
- Reduced cost of inventory through process versatility, allowing for the use of one photoresist stripper for many applications



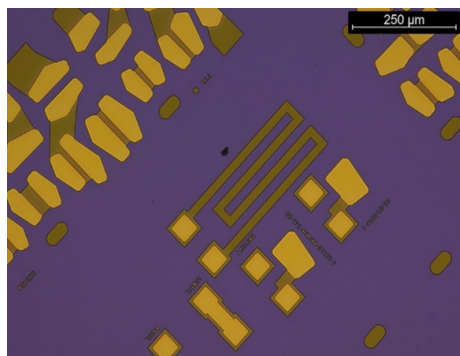
# TechniStrip® P1331 Photoresist Stripper

## High Substrate Compatibility

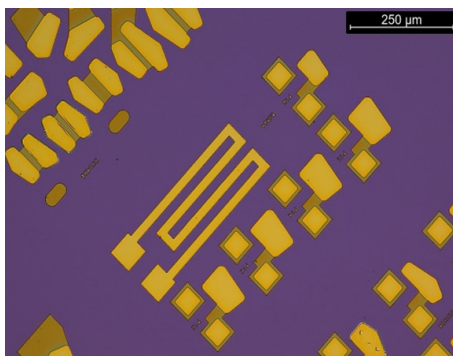
Etch Rate @ 65°C (Å/min)	Immersion	Batch Spray
Al (0.5% Cu)	< 3	< 2
Cu (PVD/ECD)	< 10	< 10
Ni	< 2	< 2
Ta/TaN	< 2	< 2
Ti/TiN	< 2	< 2
Au	0	0
Thermal SiO <sub>2</sub>	< 2	< 2
Pt	0	0
Sn/Ag	< 2	< 2

## Comparison Testing

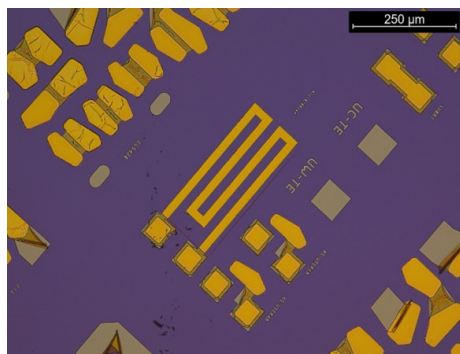
Removal of positive spin-on photoresist with TechniStrip® P1331 when compared to conventional photoresist strippers.



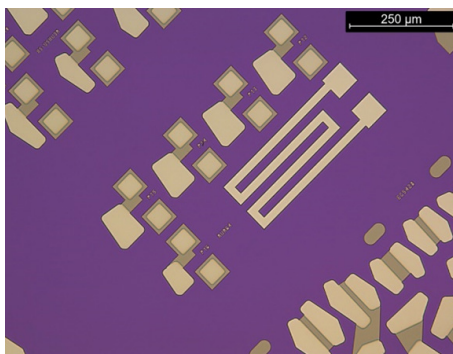
Prior to application of strippers



Stripper 1 (70°C, 60 min)  
No removal

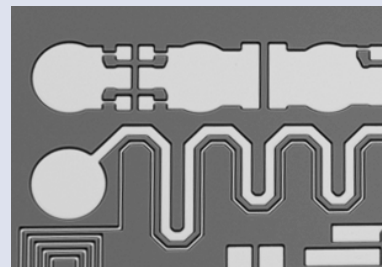


Stripper 2 (70°C, 50 min)  
Partial removal

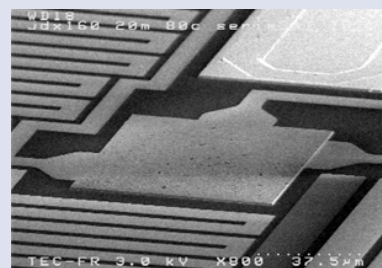


TechniStrip® P1331 (40°C, 4 min)  
Full removal

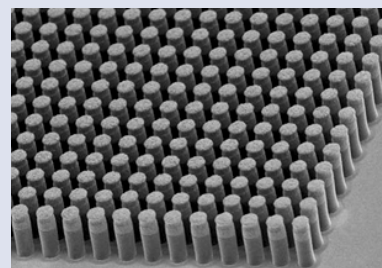
A single photoresist stripper that can be used successfully for many different applications



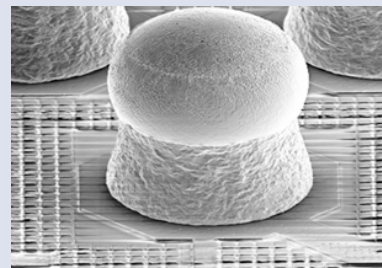
Negative tone resist stripping on copper



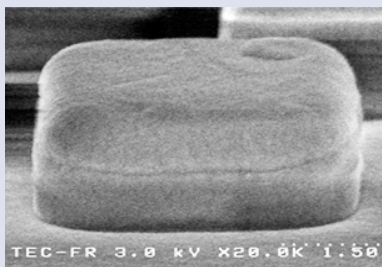
Positive tone resist stripping on aluminum



Thick negative tone resist stripping on  
70 μm copper pillars



Thick negative tone resist stripping on  
Cu pillar with SnAg



Polyimide stripping