

Product Application

TechniEtch CN10 is a highly tunable, effective & selective Cu & Ni metal etchants for UBM, RDL and Cu pillar applications.

TechniEtch CN10 is an acidic based metal etchant, containing particular additives that greatly enhance stability, low bubbling generation, Ni/Cu selectivity and metal loading capability compared to conventional oxidative acidic based solutions.

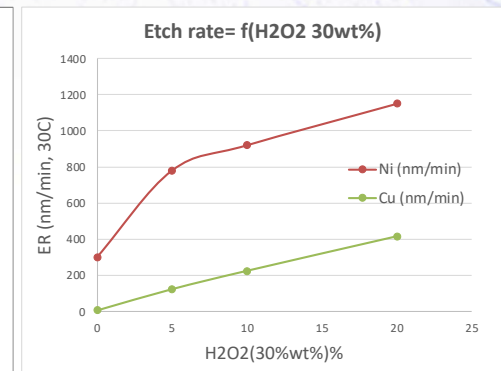
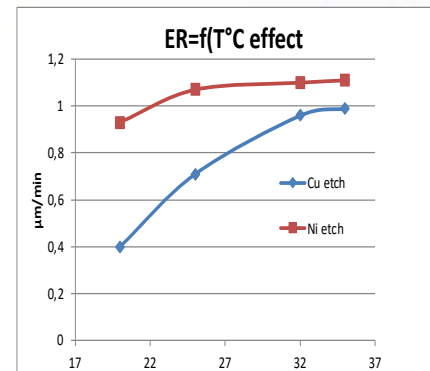
Solution Main Features:

- Better process controllability/reliability.
 - Etch rate Tunable by H₂O₂
 - Only Ni is etched without peroxide
 - Both Ni, Cu are etched with H₂O₂ spikes
 - Selectivity Cu/Ni up to 1/6
 - Better NiOx and Ni intermetallic removal
 - Better uniformity dense/open area
 - High etch rate at room temperature.
- High stability even in presence of metal contamination

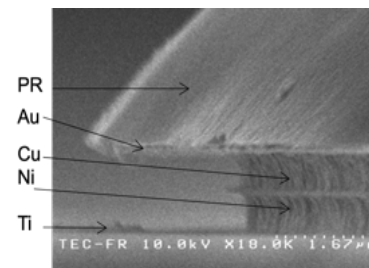
- Profile and process control enhanced with the CN10 formulation additives compared to standard peroxide-acid approach.

- Loading & bath life independent of the solution loading

Solution performance



Etch rate (nm/min) for Cu and Ni blankets = f(Temperature and H₂O₂ content)



UBM (Au/Cu/Ni) and RDL (Cu seed/Cu) applications

Physico-Chemical properties

- State: Liquid at room temperature.
- Color: colorless
- Density: 1,06.
- pH: 0.6 @ 25°C.
- Miscible with water in all proportions.
- Boiling point: >100°C.

Additional information

- For use in batch and spray tool platforms
- The metal etch rate is mass transfer dependent
 - Dynamic dispense leads to high etch rate and better uniformity.
- Water rinse
- Shelf life of 12 months minimum.
- Available for POU or RTU version

Material compatibility

COMPATIBILITY TechniEtch CN10

PVC	B	EPDM	A
Viton	A	PP	A
PVDF	A	PE	C
HDPE	B	Silicone	D
Teflon	A	NBR	B
PFA	A	Stainless steel 316i	B
PTFE	A	Kalrez	A

Temperature <30C

Ratings -- Chemical Effect : A = Excellent, B = Good/Minor Effect, slight corrosion or discoloration, C = Fair Softening, Moderate effect, continuous use loss of strength, continuous swelling may occur, D = Severe Effect, not recommended for ANY use

ER in nm/min @ 25C	Immersion
Cu (PVD)	200
Ni	800
Al(5%Cu)	<0,2
Bi, In	<0,2
Ta/TaN	<0,2
TiW	<1,5
Sn	<10
Ti/TiN/Au	<0,2
Undoped Si	<0>

With 10% H2O2 on blankets- 4PP, ICPMS, eliipsometry measurements

Quality

Technic' solutions are formulated using most adopted purity and quality raw materials to ensure and respond to specific

customer's process specifications .e.g. metal level contamination, particle count, packaging...

The full manufacturing process is in accordance with the company quality policy.

Health, Safety and Environment

To obtain comprehensive information on the safe use and handling of the Technic's solutions, a material safety data sheet is available on request.

Technic's safety policy is to optimize and promote safer chemical to the industry in accordance to latest European regulation and Customer' chemical banned substance list.

Contact

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