

TechniClean IK73

Post-Etch Residue Remover



Precision Cleaning for Advanced Semiconductor Manufacturing

TechniClean IK73 is a near-anhydrous fluorinated solution, offering complete removal of chemically inert residues, created during the patterning of high-k dielectric metal oxides of Ta, Hf, Zr.

This highly selective cleaning process does not affect sensitive substrates, such as Cu and Al. Applications include cleaning processes associated with MIM capacitors, Al pad opening and bottom electrode patterning after plasma etch.

Qualified for full-scale production globally, TechniClean IK73 is an essential product for advanced semiconductor manufacturing, ensuring seamless, superior production of cutting-edge devices.



Benefits

- Higher throughput, thanks to reduced operating times
- High metal compatibility enables advanced product design and improves yields
- Longer bath life, thanks to low evaporation rate
- Reduced temperature requirements allow for lower energy use
- Safety-conscious product design reduces handling and compliance costs, while supporting sustainable manufacturing
- Flexible toolset design reduces process costs and simplifies implementation

Features

- Operates at or near room temperature (typically $<40^{\circ}\text{C}$)
- Short processing time (normally $< 3 \text{ min}$)
- Excellent metal compatibility
- Can be mixed with water in all proportions
- Suitable for immersion, batch-spray and single wafer application



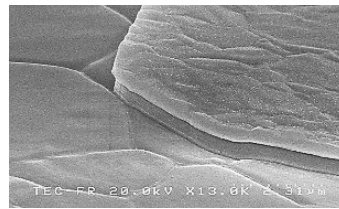
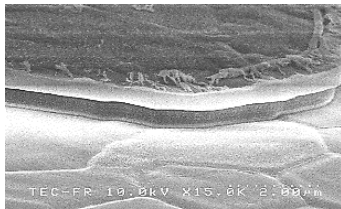
Typical AIF "flower-like" residues prior to TechniClean IK73 cleaning.

TechniClean IK73

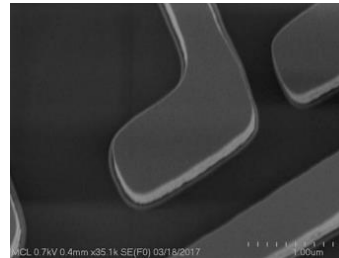
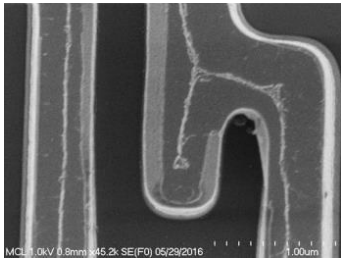
TechniClean IK73's composition has been finely tuned to achieve **fast, selective cleaning** through control over surface wetting, electrochemical reduction potential, chelating capacity, and residue solubility.

This results in complete PER dissolution at low temperatures and short processing times, during fabrication of interconnect lines, vias, PAD, Cap MIMS, electrodes, and more.

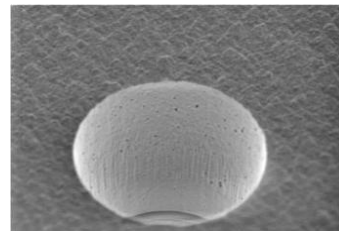
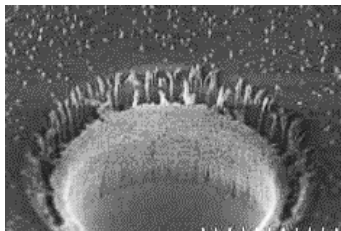
Selective cleaning with no substrate attack



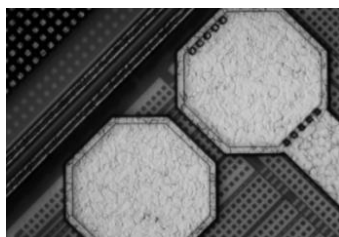
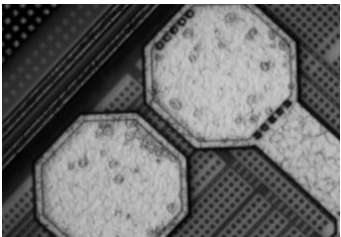
IK73 Al/TaN/SiN/TaN cleaning – 2 min 20°C.



IK73 Al/Cu line cleaning – 45s, 25°C, single wafer.



IK73 LiAlX organic membrane cleaning.



IK73 AlF high density defects cleaning.

Etch rates below 1 nm/min on Cu, W, Ni, Mo, Si₃N₄ and thermal oxide. Full compatibility data available on request.

For more information, contact us: info@technic.com