

Aluminum Etchant Chemical Bench

Operating Procedures [LINK](#)



Process Description:

Etching is a process of removing material from the surface of a wafer. Various methods of etching include: wet chemical, electrochemical, plasma etching, reactive ion etching, ion beam milling, sputtering and vapor etching. Wet etching is a completely chemical process in which the etchant solution can be highly selective to material. The reactive species in the solution creates a soluble byproduct that moves away from the exposed surface of the wafer. The etch process is controlled by time, bath time and solution composition.

Equipment Description:

The aluminum etch chemical bench has one process tank prepared with a commercially prepared Defreckling Aluminum Etch acid. The bench is equipped with two wafer holders and one holder for wafer pieces, one quick dump rinse tank (QDR), a hotplate and sink. The tank has a Teflon immersion heater and Teflon fiber optic liquid level sensor. The system controller has temperature settings for both high and low levels. The level sensor monitors the solution level in the tank and will alarm when a low liquid level is detected. The tank temperature is set at 40°C.

<i>Materials Allowed</i>	<i>Materials Not Allowed</i>
Aluminum	Other metals
Photoresists	III-V semiconductors
Quartz	Glass
Silicon	
Silicon dioxide	
Silicon nitride	