

MOLY ETCHANT - TFM **TUNGSTEN ETCHANT - TFW**

Selective etchants for moly and tungsten thin-film metallizations used in semiconductor and microelectronics technology. TFM and TFW are safe, selective etchants are buffered, mildly alkaline ferricyanide-based formulations providing high resolution patterns, with minimal undercutting and negative photoresist compatibility. Controlled uniform etching is achieved by immersion or spray etch technique. Alternatively, Moly Etchant 679 is a positive-resist-compatible blend of phosphoric-acetic-nitric acid with slower etch properties.

PROPERTIES of Moly Etchant TFM:

How do I increase the etch rate?	<ol style="list-style-type: none"> 1. The rate will approximately double with every 10 °C increase in temperature. 2. Increase the rate of stirring or agitation.
How do I reduce the etch rate?	Adding 1 part deionized water to 2 parts etchant will reduce the etch rate approximately 50%.
Do I need to dilute the etchant?	No, it is ready to use.
How do I reduce undercutting?	Increase the rate of stirring or agitation.
Appearance	Brown
pH	10
Etch Rate at 30 °C	55 Å/second
80 °C	85 Å/second
Etch Capacity (rate declines at ~70%)	30 g/gallon
Shelf Life	1 year
Storage Conditions	Ambient
Filtration	1 µm
Recommended Operating Temperatures	20-80 °C (30-40 °C most common)
Rinse	Deionized water
Photoresist Recommendations	PKP Type II or HARE SQT (SU-8 type), http://transene.com/semi/#photo
Select Compatible Materials	Au, Ni, Cu, alumina See http://transene.com/etch-compatibility/ for more details.
Select Incompatible Materials	Al, Si, Si-O
Compatible Plastics	HDPE, PP, Teflon, PFA, PVC
Country of Origin	USA
Availability	1-2 days
Available Sizes	Quart, Gallon, 5 Gallon, 55 Gallon
Packaging	HDPE
Packing	4 gallons/case
Isotropy	Isotropic
Incompatible Chemicals	Strong acids
Additional Information	---

PROPERTIES of Tungsten Etchant TFW:

How do I increase the etch rate?	<ol style="list-style-type: none"> 1. The rate will approximately double with every 10 °C increase in temperature. 2. Increase the rate of stirring or agitation.
How do I reduce the etch rate?	Adding 1 part deionized water to 2 parts etchant will reduce the etch rate approximately 50%.
Do I need to dilute the etchant?	No, it is ready to use.
How do I reduce undercutting?	Increase the rate of stirring or agitation.
Appearance	Brown
pH	8
Etch Rate at 20 °C	30 Å/second (immersion) 80 Å/second (spray)
Etch Capacity (rate declines at ~70%)	64 g/gallon
Shelf Life	1 year
Storage Conditions	Ambient
Filtration	1 µm
Recommended Operating Temperatures	20-80 °C (30-40 °C most common)
Rinse	Deionized water
Photoresist Recommendations	PKP Type II or HARE SQT (SU-8 type), http://transene.com/semi/#photo
Select Compatible Materials	Au, Ni, Cu, alumina See http://transene.com/etch-compatibility/ for more details.
Select Incompatible Materials	Al, Si, Si-O
Compatible Plastics	HDPE, PP, Teflon, PFA, PVC
Country of Origin	USA
Availability	1-2 days
Available Sizes	Quart, Gallon, 5 Gallon, 55 Gallon
Packaging	HDPE
Packing	4 gallons/case
Isotropy	Isotropic
Incompatible Chemicals	Strong acids
Additional Information	---