

Dilute Hydrofluoric Acid Etchants

- FUJIFILM Dilute Hydrofluoric Acid Etchants are formulated from high purity 49% Hydrofluoric Acid and deionized water.
- Formulations are available in standard H₂O:HF ratios or made to customer specification.
- Stringent quality control of hydrofluoric acid content ensures lot to lot reproducibility of etch rate characteristics.
- FUJIFILM Dilute Hydrofluoric Acid Etchants are available in 1 Part per billion (1PPB), Parts per Billion (PPB), and Certified Particle Grade (CPG).
- Formulations are also available with OHS™ (FUJIFILM Surfactant) to improve surface wetting and etch uniformity.
- Dilute Hydrofluoric Acid Etchants are utilized to etch SiO₂ films in applications where buffering of fluoride ions is not required.
- Applications include etching or stripping SiO₂ films, pre-diffusion and premetallization surface preparation, and chemical polishing of quartz diffusion tubes.

Generally used at room temperature (21°-25°C) in polypropylene, and polyethylene, containers.

*Table 1.
Assay Specifications, Etch Rates Parameters, and Physical Properties*

Ratio H ₂ O : HF	Assay by Weight % HF	Typical Etch Rates @ 21°C on Undoped Thermal Oxide in Angstroms per minute	Specific Gravity @ 25°C
1:1	26.07 - 26.47	2465 - 2540	1.076
2:1	17.75 - 18.15	1230 - 1280	1.050
3:1	13.34 - 13.94	800 - 850	1.045
4:1	10.79 - 11.19	600 - 625	1.029
5:1	9.00 - 9.40	475 - 500	1.024
10:1	4.88 - 5.28	235 - 250	1.012
20:1	2.48 - 2.88	120 - 140	1.006
30:1	1.62 - 2.04	80 - 100	1.003
40:1	1.17 - 1.57	60 - 80	1.002
50:1	0.91 - 1.31	45 - 65	1.001
100:1	0.36 - 0.76	20-40	1.000