Plasma Solutions

Plasma Gases

GAS	MIXTURE	APPPLICATIONS
0_2	100%	• Removal of organic contamination • Stripping of photoresist • Activation of polymers • Degreasing of metals and polymers • Hydrophilation • Oxydation
H_2	Used in conjunction with carrier gas in levels of less than 10%	• Cleaning metals without oxydation • Hyrophobation • Removal of oxides
Ar	100%	• Activation and degreasing of metals • Hydrophilation • Removing epoxy bleed-out from hybrid circuits without oxydation, often used with up to 3% O_2 for faster bleed-out removal • Oxide removal
He	100%	• Activation and degreasing of metals and polymers • Hydrophilation • Cooling agent for O_2
N_2	100%	• Activation of polymers • Removal of Epoxy bleed-out on Hybrid circuits • Removal of oxides
C_2H_4	100%	• Polmerization
CH_4	100%	• Polmerization
C_2H_2	100%	• Polmerization
CF_4	100%	• Epilamization • Silicon etchant
SF_6	100%	• Silicon etchant

FS-100	97%He 3%O_2	• Removal of thin film organic contamination from easily oxidized metals and synthetics • Low temperature removal of organics from metals without oxidation • Low temperature ashing
FORM-ING GAS	90-95% N 5-10% H	• Removing oxides, especially useful as a follow-up process in hybrid cleaning or other oxidizing processes as glass to metal seals
DS28	N_2 with 2ppm water	• removal of organics from sensitive substrates without oxidation
DS180	92%O_2 8%CF_4	• Removal of thick layers of photoresist
DS100	99.78%(40% O_2 to 60%He) .22%CF_4	• Removal of photoresist from chrome masks without oxidation of underlying chrome • Removal of organic contamination from chrome
DS300	97%O_2 3%CF_4	• Photoresist removal in aluminum chambers or with faraday insert in quartz chambers • Removal of organic contamination
DS16281	99%N_2 1%O_2	• Removes photoresists films over oxidizing or with TCR and resistor networks being unchanged (thin films only) may also have increased O_2 as designated by the last digit signifying the percentage
FREON MIXES	4%O_2 96%CF_4 8.5%O_2 bal CF_4 17.5%O_2 bal CF_4 97%(99.5% He .5%O_2) 3%CF_4	• etching SiO_2, Si_3N_4, Si, molybdenum, tantalum, tantalum nitride, tungsten • DE100, will not etch A1, ceramic, GaAs, indium antimonide, or sapphire • PDE100, more common etchant than DE100, etches 20 to 30% faster • DE101,etches SiO_2 and Si_3N_4 without etching silicon
IR101	70% ETHYLENE TRICHLORIDE 30% 1,1,2 TRICHLOROTRIF LOROETHANE	• Removal of inorganic contamination particularly tin from resist or contaminated chambers (used in conjunction with O_2), will also remove window oxide grown on exposed Si
FS100	97%He 3%O_2	• low temperature organic removal • flash strip of photo masks

The above mixtures may be pressure or flow dependant to achieve optimum results.

For further information contact:

Plasma Solutions, Inc.
www.plasmasolutionsinc.com