siconnex

GREEN GOALS. YELLOW SOLUTIONS.

SICOZONE FOR SUPERIOR RESULTS IN CLEAN AND STRIP APPLICATIONS

SicOzone stands out in the industry with its unparalleled efficiency in clean and strip applications. Its uniqueness lies in its high efficacy, making it a standout choice for the semiconductor industry.

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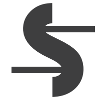
SUSTAINABLE CLEANING & STRIPPING WITH OZONE

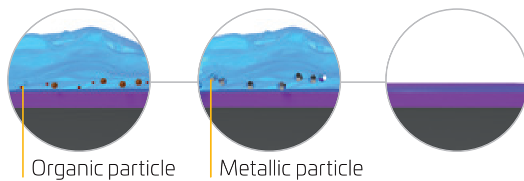
sicOzone by siconnex



CLEAN

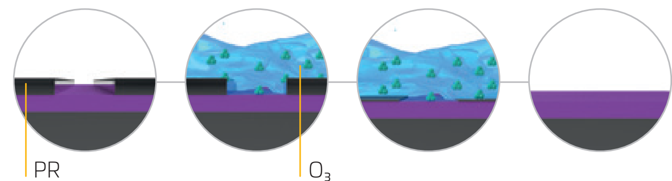
The smart usage of ozone combined with flexible amounts of ammonia, hydrochloric-, hydrofluoric acid and water enables outstanding cleaning performance.

A minimal DI water flow, sprayed onto the wafers by combining minimum amounts of ammonia with ozone, enables the replication of a conventional SC1 step, providing more efficiency in organic and metallic cleaning. A similar approach is used for SC1 and DHF. Cleaning efficiency is easily controlled thanks to the high flexibility of inline spiking technology.



STRIP

The photoresist stripping process utilizes ozone, promoting sustainable resource usage. It involves DI water combined with ozone in gas form to effectively remove photoresist from the wafer surface.
Two alternating steps in the recipe ensure efficient photoresist removal, accommodating various resist types, from positive to negative, implanted to high-treated resists. Additionally, spiking small amounts of chemical into the DI water stream enhances the removal process, maximizing the removal rate.



BENEFITS AT A GLANCE

Specs

- Particle performance: <20 adders/>0,12µm
- Metal contamination: Al, Mg 5E10/others 2E10
- Non-uniformity: < 1%
- Cleaning efficiency: >99%
- Oxygen only
- No need of sulfuric acid & hydrogen peroxide

High process flexibility

- High implant resist strip
- Photomask clean
- Post dicing clean
- Oxide etch

Applicable for following materials

- Silicon carbide
- Silicon
- Oxide
- Nitride

85 % Reduction of cost per wafer

56 % Increase of throughput

69,7 % Reduction of chemical consumption

29,4 % Reduction of waste treatment

Compared to conventional processes