

Technical Data Sheet - TDS

LogiPol Haze Inhibitor - Haze Suppressant

INTRODUCTION

LogiPol Haze Inhibitor is a haze-inhibiting polishing additive specifically formulated to help limit the time required for haze removal during the polishing process of silicon and other II-IV and III-V materials. **LogiPol Haze Inhibitor** also works to prevent the reformation of haze during subsequent storage and handling procedures.

- **LogiPol Haze Inhibitor** can be used to reduce haze during polishing by addition to the final slurry. **LogiPol Haze Inhibitor** is most effective if used at the end of the final polish cycle. **LogiPol Haze Inhibitor** should not be used during stock removal since it significantly inhibits removal rates; however, **LogiPol Haze Inhibitor** can be used after the stock cycle to stop the chemical activity of the slurry.
- **LogiPol Haze Inhibitor** is effective in the prevention of haze formation after polishing if wafers are stored in a solution of **LogiPol Haze Inhibitor** and deionized water.
- Experiments have shown **LogiPol Haze Inhibitor** to be an effective deoxidizing agent when used on aluminum memory disks or read-write heads for the removal of the oxide films caused by Al_2O_3 .

LogiPol Haze Inhibitor Haze Suppressant is available in **Premix**, a partial dilution for easier handling.

The information provided in this note should be used as a starting point for the customers' application.

USE

LogiPol Haze Inhibitor Premix is ready for immediate use.

The Premix can be used in the applications below.

Quench Stream Application: Mix one part Premix and use in the following ways:

- During the last two minutes of the polishing cycle, add the **LogiPol Haze Inhibitor** as a separate stream.
- Stop slurry flow and begin rinse cycle. Continue **LogiPol Haze Inhibitor** flow throughout rinse.
- In an operation where the wafers must sit on the polishing pad while the carrier unloading cycle is performed, add the **LogiPol Haze Inhibitor** solution during the last 15-30 seconds of rinse to prevent most wafer surface defects caused by the chemical activity of the stock polish slurry.

Final Slurry Additive: Add Premix to deionized water prior to colloidal silica addition. A quantity sufficient to yield a final concentration of one part **LogiPol Haze Inhibitor** solution to 50-60 parts of final solution should be used.

Wafer Storage Solution: Use one part of Premix to 100 parts of deionized water.

All traces of **LogiPol Haze Inhibitor** can easily be flushed away with deionized water. Oxidizing acids will speed the process.

Standard packaging includes one (1) US gallon bottles five (5) US gallon pails. All containers are High Density Polyethylene (HDPE). Maintain storage in a temperature-controlled environment, between 40 and 100° F, avoiding prolonged exposure at either extreme.

Product Handling Advice:

LogiPol Haze Inhibitor is completely biodegradable and, where regulations permit, may be safely flushed into sewer systems. No special disposal precautions are necessary. **LogiPol Haze Inhibitor** contains no metallic ions. However, to avoid skin or eye irritation, handlers should use personal protective equipment including; rubber gloves, protective clothing, and eye protection. Follow all SDS and label precautions and use appropriate industrial safety and hygiene practices when handling or using this product.

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SHELF LIFE

Natural biological activity and oxidation reduce the concentration of the active agents in **LogiPol Haze Inhibitor** in water.

The following are recommended shelf-life limitations for **LogiPol Haze Inhibitor** solutions:

- **LogiPol Haze Inhibitor Premix:** 12 month
- Final dilution of Premix: 72 hours

OTHER NOTES

- The most consistent haze-free results are obtained if the final polishing temperature (end of cycle) remains below 108° (42° C).
- If pad squeaks on stopping, increase the concentration of **LogiPol Haze Inhibitor**.
- Slurry must be present for **LogiPol Haze Inhibitor** to provide effective haze removal. However, to get best surface, **LogiPol Haze Inhibitor** should be dripped directly onto the polishing pad as a separate stream. Both excessive and inadequate end of cycle rinsing must be avoided. Over-rinsing can cause the silicates deposited in the pad to be drawn out, resulting in haze from the alkaline exposure. Under-rinsing can leave excess slurry on the wafer which can generate an alkaline etch-related haze.

LogiPol Haze Inhibitor greatly enlarges the window between excessive and inadequate rinsing and helps eliminate variation caused by the reservoir capacity of the pad by masking the wafer surface from the etching effect of the slurry.

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