Direct metallization, replacing electroless copper, has become the default process for the newest PCB specifications. And carbon technology wins; meeting the demands of reliable microvia connections and resin compatibility. But carbon technology has been tough on thin foil constructions due to the final copper etching.

With Eclipse LE, the low-cost, process simplicity and environmental benefits of carbon direct metallization meet the design challenges of thin-foil, flex, and coreless constructions, while maintaining the microvia connection reliability OEMs have come to love with carbon technology.

Eclipse LE imparts a copper protection during the conditioning step, allowing for a super-mild microclean after carbon deposition. Carbon selectivity has never been better. And your profits will never be better, building the most difficult PCBs, with the world’s most efficient primary metallization chemistry.

KEY FEATURES

- Less than 0.25 microns of copper etch, a 75% reduction
- Compatible with thin copper constructions as thin as 3 microns
- All the environmental, cost, and process ease benefits of Eclipse
- Proven in production on the world’s most challenging PCB designs
- The most stable PTH process; non-dynamic chemistry
- Part of the industry leading SysteMac process
- The only direct metallization solution for thin foil, any-layer via designs
The Most Technically Advanced Chemistries, Formulated for Simple Processing.

Consistency is everything. This three step, horizontal metallization process is comprised of stable, non-dynamic chemistry that ensures consistency panel to panel, day to day.

THE ONLY COMPLETE SOLUTION FOR THIN, CORELESS DESIGNS

- **LOW ETCH**
  - Eclipse LE Conditioner
  - Eclipse LE Carbon
  - Eclipse LE Microclean

- **STANDARD ETCH**

**LOW ETCH**

- Thin innerlayer foils are sensitive to any copper etching processes. Negative etchback and reduced foil conductors result from overetching.

**STANDARD ETCH**

- Eclipse LE’s Microclean is the answer for electrical and physical reliability on 3µm foils. Eclipse LE has minimal effect on thin foils. Flex circuit, coreless, and ALIV constructions are no challenge for LE.

**WE NEED TO METALLIZE ONLY THE DIELECTRIC, AND KEEP THE COPPER PERFECTLY CLEAN FOR ELECTROPLATING. THE LE CONDITIONER'S SPECIFIC BONDING READIES THE PCB FOR THIS SELECTIVITY.**

**A UNIQUE LE MICROCLEAN IS FORMULATED SPECIFICALLY FOR LIFTING OFF THE COPPER PROTECTION, RETURNING THE FOIL COPPER TO PRISTINE CONDITION.**

MacDermid Enthone

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