



OmniCoat

Adhesion Promoter/Release Layer

Description

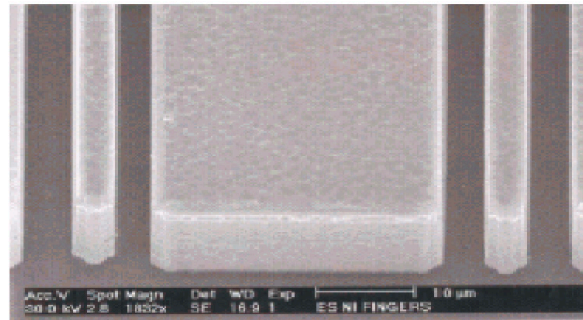
OmniCoat allows easy stripping of hard to remove photoresists and other materials. It also increases adhesion of SU-8 and SU-8 2000 resists.

Material Attributes

- Easy, fast, clean & safe removal
- Uses existing strippers and processes
- Produces a very thin film
- Applied by spin coating
- Adhesion promoter

Benefits

- Enables stripping of SU-8 and SU-8 2000 resists so that reworks can be done
- No highly dangerous wet chemistry or reactive gases required
- Minimizes or eliminates under plating
- No deposition layer required
- Improves adhesion to difficult substrates like Au, Cu and Quartz



Plated Nickel structure after removal of SU-8 using OmniCoat



Processing Guidelines



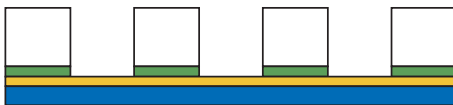
1. Coat and bake OmniCoat over seed layer



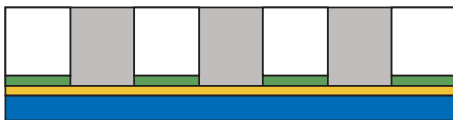
2. Coat and bake SU-8 or SU-8 2000



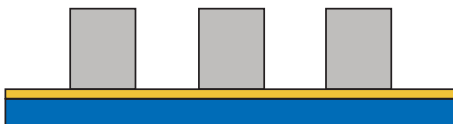
3. Expose and develop SU-8 or SU-8 2000



4. Develop (wet or dry) OmniCoat



5. Plate metal



6. Strip resist in Remover PG

Coat Release Layer

Dynamic dispense: 1–4 ml (depending on substrate diameter) of OmniCoat

Spin: 500 rpm for 5 seconds
with acceleration of 100 rps
3000 rpm for 30 seconds
with acceleration of 300 rps

Note: For effective removal a thickness of no less than 17 nm should be applied. Thicker coatings could be more effective depending on substrate type.

Bake: 200°C hot plate for 1 minute;
allow substrate to cool to room
temperature

Coat, Expose, PEB & Develop SU-8 or SU8-2000

Perform normal SU-8 processing according to the guidelines from the SU-8 datasheet.

Develop OmniCoat

O₂ Plasma removal: Typical descum program
Power – 100 watts
Flow Rate – 35 sccm
Pressure – 190 mTorr
Time – 30 seconds

Wet removal: MCC 101A Developer:
Immerse for one minute with
agitation. Rinse with DI water for
2 minutes.

Microposit™ MF-319:
Immerse for 30 seconds with
agitation. Rinse with DI water for
2 minutes.

Other developers can be used. The process must be adjusted for different developer formulations. It may be beneficial to perform a short O₂ plasma flash descum after wet development.

OmniCoat Material and Equipment Handling

OmniCoat is compatible with glass, ceramic, unfilled polypropylene, high-density polyethylene, polytetrafluoroethylene, stainless steel and equivalent materials. OmniCoat is compatible with most commercial resist processing equipment.

Processing Environment for OmniCoat

For optimum results, use OmniCoat resists in a controlled environment:

Temperature 20-25°C ± 1°C (68-77° ± 2°F)
Relative humidity 35-45% ± 2%

**Handling**

Consult Safety Data Sheet (SDS) for details on the handling procedures and product hazards prior to use. If you have any questions regarding handling precautions or product hazards, please email productsafety@kayakuAM.com.

Storage

Store upright in original sealed containers in a dry area between 4°C and 27°C (40-80°F). Keep away from sources of ignition, light, heat, oxidants, acids and reducers. Do not use product after the expiration date (13 months from date of manufacture).

Disposal

The material and its container must be disposed in accordance with all local, state, federal and/or international regulations.

Disclaimer

Notwithstanding anything to the contrary contained in any sales documentation, e.g., purchase order forms, all sales are made on the following conditions:

All information contained in any Kayaku Advanced Materials product literature reflects our current knowledge on the subject and is, we believe, reliable. It is offered solely to provide possible suggestions for the customer's own experiments and is not a substitute for any testing by the customer to determine the suitability of any of Kayaku Advanced Materials products for any particular purpose. This information may be subject to revision as new knowledge and experience becomes available, but Kayaku Advanced Materials assumes no obligation to update or revise any data previously furnished to a customer; and if currency of data becomes an issue, the customer should contact Kayaku Advanced Materials requesting updates. Since Kayaku Advanced Materials cannot anticipate all variations in actual end uses or in actual end-use conditions, it makes no claims, representations or warranties, express or implied including, without limitation any

warranty of merchantability or fitness for a particular purpose; and the customer waives all of the same. Kayaku Advanced Materials expressly disclaims any responsibility or liability and assumes no responsibility or liability in connection with any use of this information including, without limitation, any use, handling, storage or possession of any Kayaku Advanced Materials products, or the application of any process described herein or the results desired or anything relating to the design of the customer's products. Nothing in this publication is to be considered as a license to operate under or a recommendation to infringe any patent right.