

**Anti-Stick
Coating Technology**

Service + Technology + Global

PACT- Photronics Anti-stick Coating Technology

Photronics offers **Anti-stick Coating Technology** on photomasks for improved performance of contact and proximity printing!

This hydrophobic fluoropolymer anti-stick coating is a proven technology for the reduction of unwanted resist type defects that stick to the mask during exposure. It also increases the number of exposures between cleanings and prolongs the life of the photomask thereby lowering the aligner COO.

Onsite Contact Angle measurement tool provides quantitative quality control of contact angle and surface energy. Contact Angle measurements are available with coated masks upon request.

Coating Properties	
Coating Thickness	<100nm
Index of Refraction	1.34
Contact Angle	115° typical
Surface Energy	<16.5 dyne/cm



Angles: {120.50°,120.00°}



Improve Yields + Increase throughput

- +** Helps reduce defects caused by unwanted photoresist sticking to the mask.
- +** Reduces the need to clean masks as often thereby increasing the number of exposures between cleanings.
- +** Prolongs the life of the mask because of the reduction in cleaning and handling.

By using our coating you will minimize photoresist defects from sticking to the mask which will improve yield by reducing defects and increase throughput allowing a greater number of exposures between cleaning, and extend the life of the photomask because of reduced cleaning cycles.

Precision and Uniformity

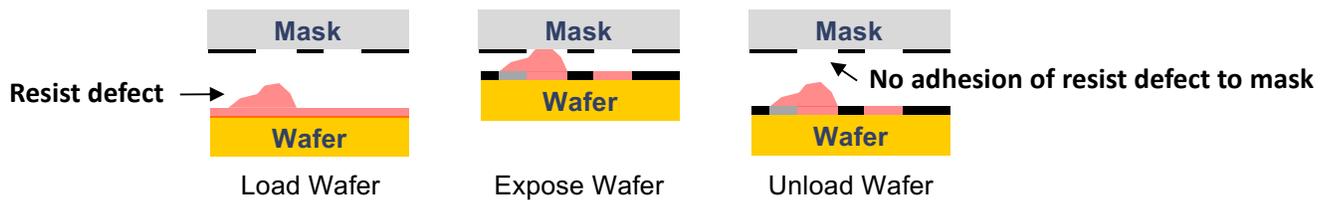
Unlike other coating providers in the market, Photronics uses state-of-the-art equipment in a class 1 cleanroom environment to apply and verify our coating, ensuring the most precise coating thickness and uniformity under the purest conditions.

CONTACT YOUR PHOTRONICS SALES REPRESENTATIVE

Without PACT Anti-Stick Coating



With PACT Anti-Stick Coating



Characteristics of Resist Particles:

- Caused by unwanted contact between mask and wafer due to coating defects or poor gap exposure setting.
- Contaminate chrome side of the mask.
- May cause print defects.
- Stronger adhesion to mask surface.

FAQ's

Q: What is **PACT** and how does it work?

A: **PACT** stands for **Photronics Anti-stick Coating Technology**. It is the most advanced anti-stick coating on the market today. The coating agent is an amorphous fluoropolymer that acts as a release layer between the photomask and wafer. It has non-stick properties and minimizes photoresist from sticking to the mask thereby improving the performance of the mask and aligner.

Q: Will **PACT** interfere with any of the photomask characteristics, such as light transmissivity, CD's, or Overlay?

A: No! **PACT** has been tested and measured with our state-of-the-art equipment and has been found not to adversely affect any of these characteristics.



This coating is available on **photomasks up to 9"** manufactured by Photronics or supplied by the customer.

If you are interested in evaluating this coating for use in your contact or proximity printing process please contact your Photronics Sales Representative.

www.photronics.com
203-775-9000

