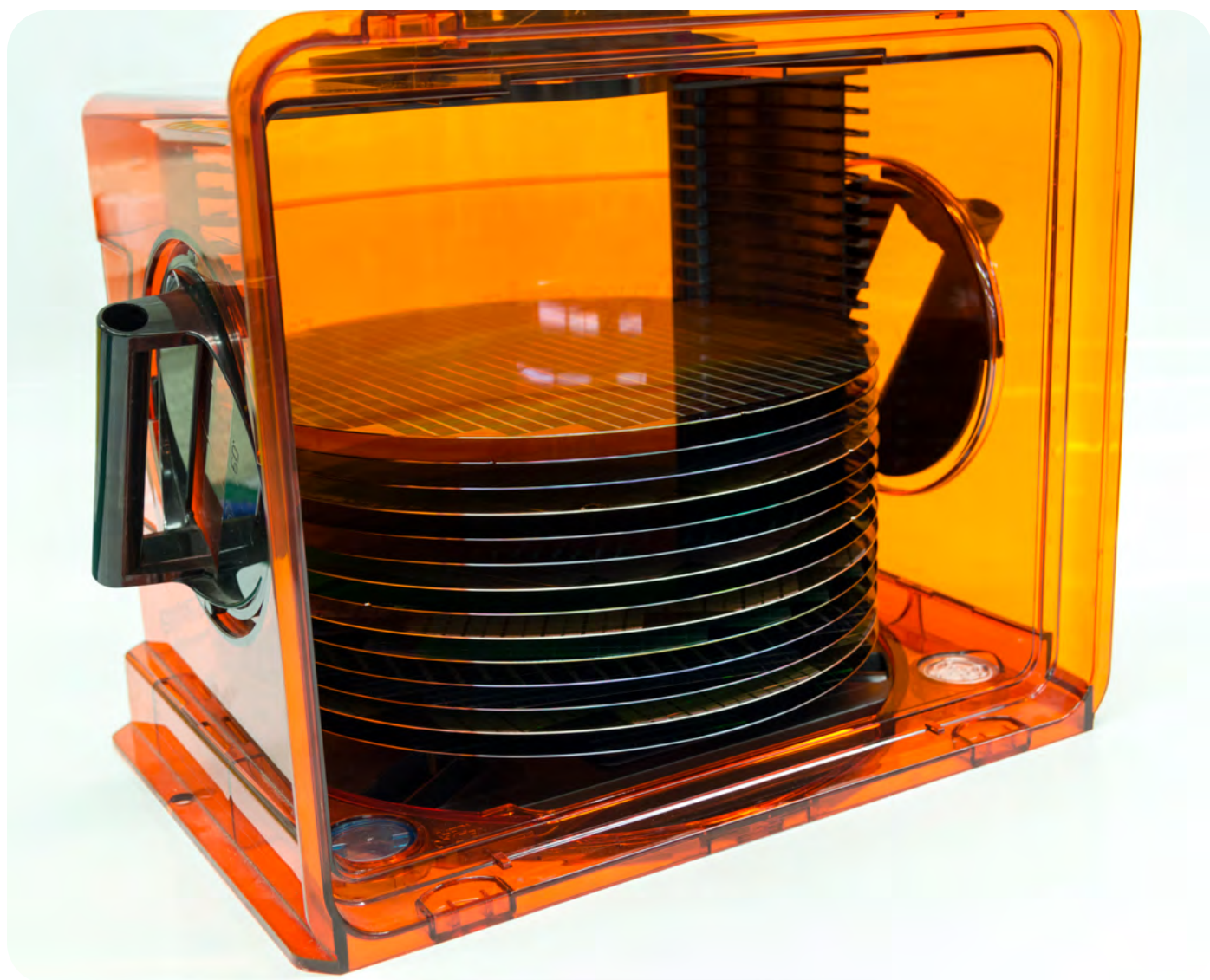


# SOLSTICE DUO™ 193FS ANTI-REFLECTIVE COATING

ELECTRONIC POLYMERS



# SOLSTICE DUO™ 193FS

## A SILICON-RICH BARC FOR DAMASCENE AND OTHER ADVANCED PATTERNING APPLICATIONS

### BENEFITS

- Anti-reflective property provides superior CD (critical dimension) control during photoresist patterning
- Polymer designed to fill (<50nm vias and planarize topography)
- High strip rate in fluoride and amine based wet stripping chemistries
- Organo-siloxane based polymer keeps the as patterned CD intact, enabling a wide etch process latitude
- Industry proven technology for damascene patterning

### OVERVIEW

DUO193FS is designed for use in semiconductor manufacturing to improve and extend ArF photolithography and the plasma etch process. Containing a patented\* organo-siloxane (RxCH3ySiOz) polymer

(R = organic chromophore), DUO193FS coatings meet the lithographic and etch requirements necessary for the patterning of thin film features within state-of-the-art IC devices. Properties include: bottom anti-reflective coating (BARC) for ArF lithography, fill planarization of line or via topography and a faster wet etch rate than previous inorganic BARCs.

DUO193FS offers excellent plasma etch characteristics. The organo-siloxane polymer comprising DUO193FS provides a high degree of plasma etch selectivity to photoresist. Additionally, the organo-siloxane polymer allows for matched plasma etch selectivity to Low-k SiOCH and FSG dielectric films facilitating Dual Damascene patterning. Such plasma etch selectivity is required for exact transfer of the as patterned photoresist dimensions into the underlying thin films.

As requested by customers, DUO193FS is tuned to have a high strip rate in Low-k selective fluoride and amine based wet stripping chemistries. These strippers are designed to remove the inorganic BARC without damage to the underlying ILD.

### Optical Properties

$n_{193nm} = 1.8$   
 $k_{193nm} = 0.35$

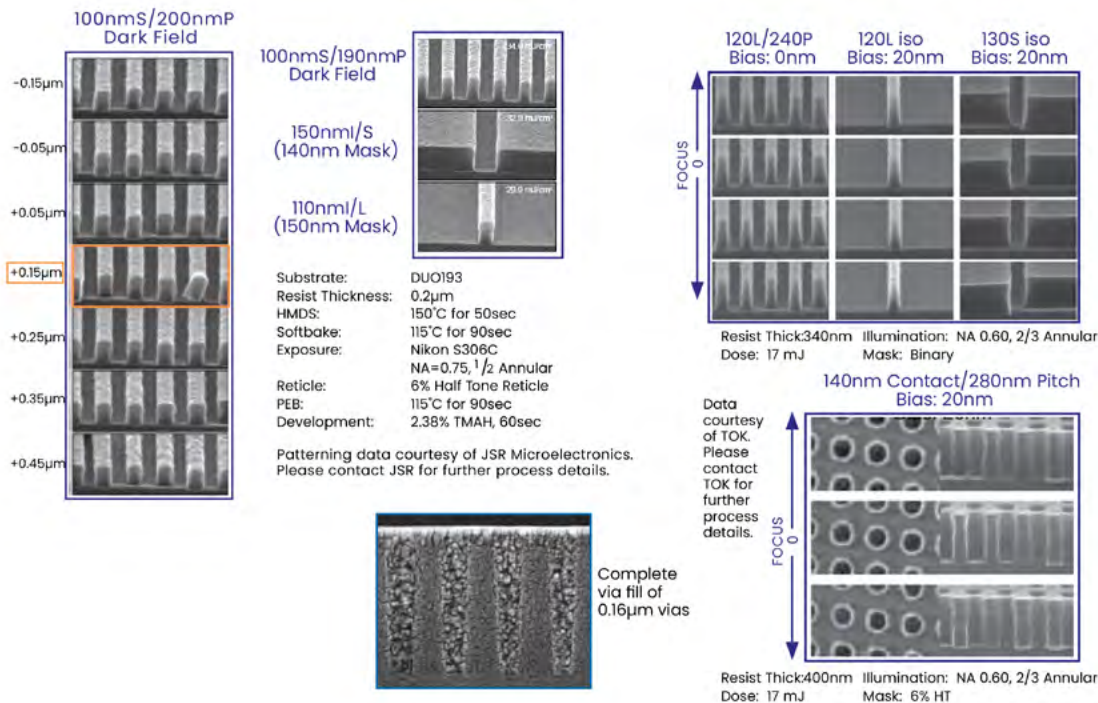
### Material Stability

Shelf Life @ 0°C: >12 months  
 Shelf Life @ 50°C: >9 months

### Bottle sizes available:

(Glass, HDPE, NowPak)  
 250ml, 500ml, 1L, 2.5L

## ADVANCED ARF PHOTORESIST PATTERNING



For More Information,  
[Click Here](#)

**Solstice Advanced Materials Inc.**

115 Tabor Rd. | Morris Plains, NJ 07950

