



For Semiconductor Advanced Packaging Bump Processing, Shin-Etsu Chemical Has Introduced Ultra Thick Photoresist - SIPR-7126

For thick specialty applications up to 100 microns, SIPR-7126 is designed for advanced packaging, and GaAs and MEMS devices

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For thick plating applications like copper pillar bump processing in semiconductor advanced packaging, Shin-Etsu has introduced a positive tone, chemically amplified ultra thick photoresist, SIPR-7126. The photoresist was developed to plate high aspect ratio features, like those used in copper pillar processing, and GaAs and MEMS devices.

These special applications need an ultra thick layer of photoresist to help cover topography on the integrated circuit and to plate very high aspect ratio features. The plating chemistries are complex and varied so the resist must also be robust to the different plating environments.

Through-Silicon Vias (TSV)

SIPR-7126 is also applicable to semiconductor etch applications, like MEMS and through-silicon vias (TSVs), where process engineers must etch the entire thickness of silicon to build the device circuitry.

This flexible i-line photoresist can be developed by standard TMAH solutions; can be exposed by multiple exposure tools, such as steppers and aligners; and can plate up to 100 microns in a single coat with vertical profiles.

Ultra Thick Photoresist Features Include:

- excellent flexibility with different plating chemistries
- easy removal
- easy rework and,
- no post exposure bake needed.

The 7100 series has been in production for several years and the latest version, SIPR™-7126, has been optimized to reduce processing steps and improve removability. This new photoresist is available for sampling and evaluation by contacting Shin-Etsu MicroSi.

SPIE

With Shin-Etsu's over 15-year history producing i-line photoresists, the product line has solved a multitude of manufacturing problems in semiconductor applications. These products, along with Shin-Etsu MicroSi's line of photolithography, packaging and flexible

printed circuit materials will be on display at the [SPIE conference and exhibition](#), Feb. 24-25, at the San Jose Convention Center in San Jose, California.

About Shin-Etsu

Shin-Etsu Chemical Co., Ltd., the Tokyo based chemical company, is the world's largest supplier of semiconductor materials, semiconductor silicon, PVC resin, synthetic quartz glass and methylcellulose and is a major producer of materials including silicones and rare earth magnets. Shin-Etsu Chemical's stock (TSE: 4063) is listed on three markets: The Tokyo, Osaka and Nagoya Exchanges in Japan. <http://www.shinetsu.co.jp>

Shin-Etsu MicroSi Inc. is a wholly owned subsidiary of Shin-Etsu Chemical Co., Ltd. With its headquarters in Phoenix, Arizona, Shin-Etsu MicroSi provides high performance products and materials, specifically designed to address today's photolithography, packaging and flexible printed circuit requirements. www.microsi.com

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