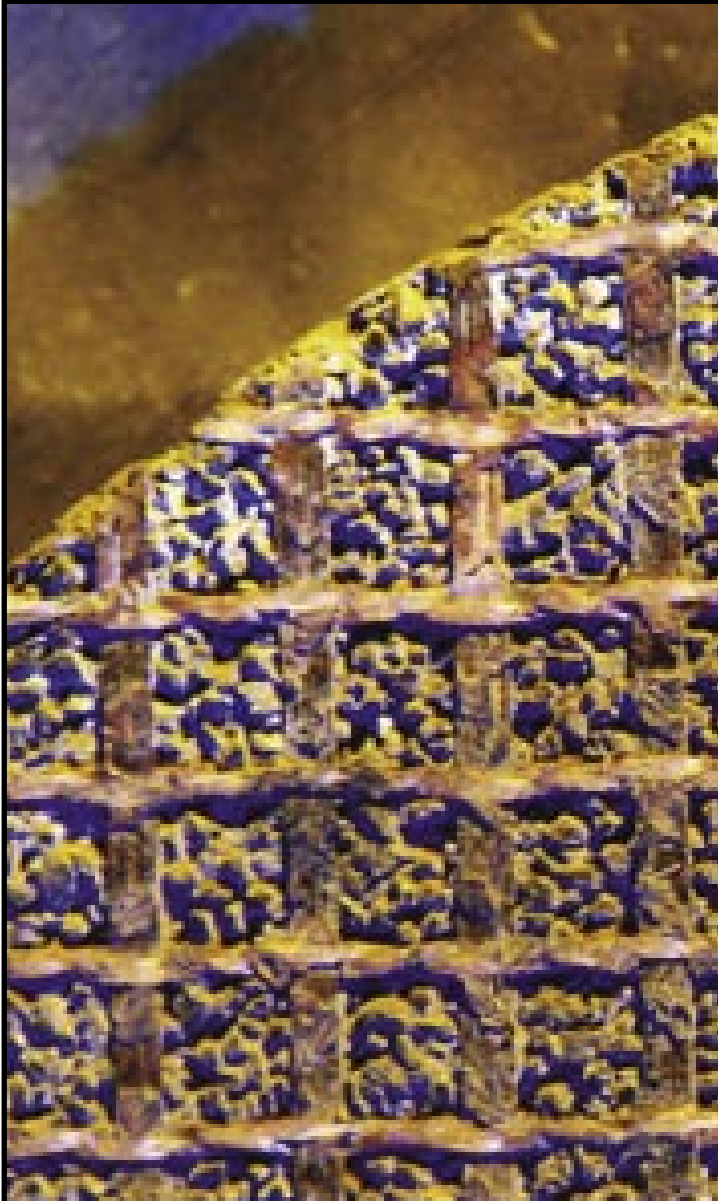




## **GenTak<sup>®</sup> 230 / GenSolve<sup>™</sup> 500**




*GenSolutia<sup>™</sup> Products*

Wafer Mount

Wafer Demount

The solution  
to boost yields

 **General Chemical**  
Electronic Chemicals Group

# The solution to boost yields

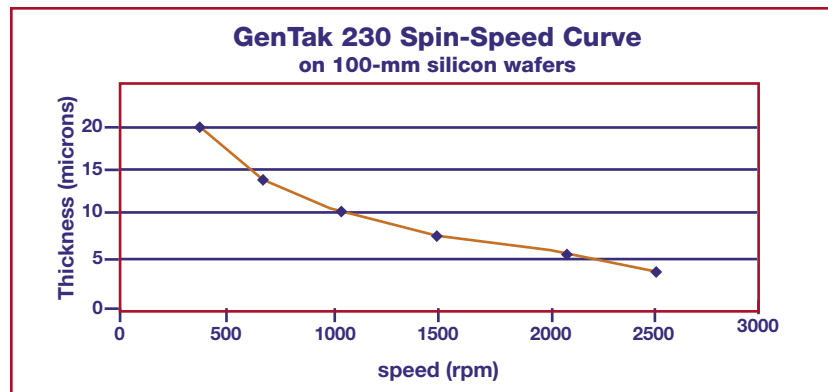
ultra-high purity acids, etchants, solvents and adhesives

**GenTak® 230** temporary adhesive provides the ability to mount a variety of materials, such as silicon, InP, GaAs or liquid crystal polymer (LCP) to a carrier substrate (silicon, glass or sapphire) for the purpose of thinning the material.

**GenTak 230** has an elevated softening point, which provides for higher temperature processing latitude than common temporary adhesives, making plasma etching and photoresist curing possible.

| Soften Point                       | Melt Point      |
|------------------------------------|-----------------|
| ASTM Penetration with sharp object | Pour/Flow Point |
| 120°C – 130°C                      | 170°C           |

**GenTak 230** offers easy application and good thickness control using easily characterized spin techniques, such as those used in photoresist applications. The following is an example of the spin-speed versus thickness correlation characteristic of **GenTak 230**. The typical spin-speed is 1000 rpm for 20-30 seconds. This gives a single coat thickness of 10 microns. The addition of a second coat increases the coat thickness to 20-25 microns.



**GenTak 230** facilitates easy observation of photo alignment marks through carrier and adhesive.

**GenTak 230** is applied either on the material to be thinned (topography surface) or the carrier substrate or both and then, initially cured and planarized to achieve low TTV (total thickness variation). To achieve a proper bonding layer thickness of **GenTak 230**, two applications may be desirable. The material and the substrate are then aligned to each other, joined and finally cured under pressure.

### GenTak 230 Typical Mounting Cycle for a Wafer Bonder

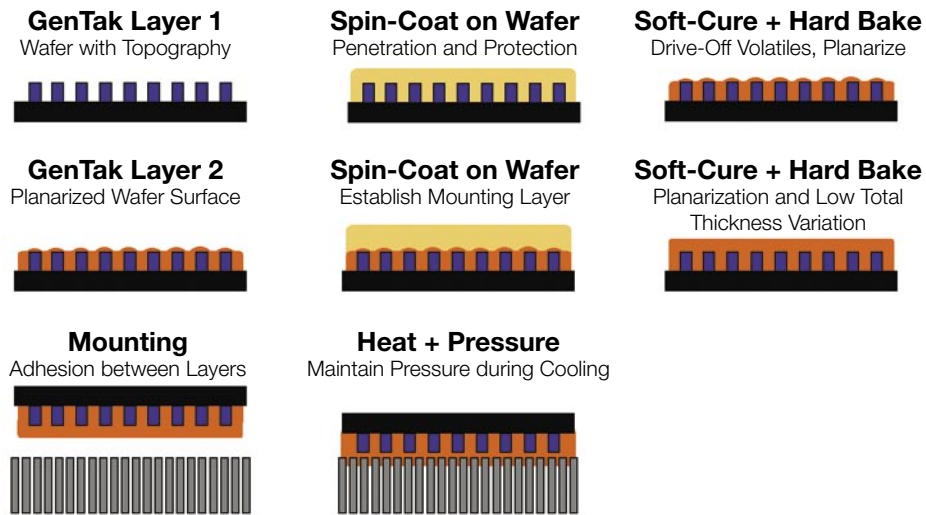
| Event  | Operation   |
|--------|---|
| Outgas | Initial outgas and vacuum stabilization before temperature or pressure applied  |
| Heat   | Temperature increased until high set point is achieved (150°C). Pressure constant during temperature ramp. Pressure applied and wafer-carrier allowed to stabilize. |
| Soak   | Stabilization of pressure at set point temperature  |
| Bond   | Temperature and pressure held constant  |
| Cool   | Pressure maintained during cool down. Pressure released when low set point temperature (80°C) achieved  |

**GenTak 230** is resistive to many semiconductor processing chemicals. This allows for backside processing after the wafer has been mounted and wafer backside thinning has been completed.

| <b>GenTak 230<br/>Process Chemical Compatibility</b> |           |
|--|-----------|
| Sulfuric Acid, 6N                                    | No Effect |
| Hydrochloric Acid, 6N                                | No Effect |
| Phosphoric Acid, 20%                                 | No Effect |
| Acetic Acid, 20%                                     | No Effect |
| Hydrogen Peroxide, 15%                               | No Effect |
| Sodium Hydroxide, 10%                                | Effect    |

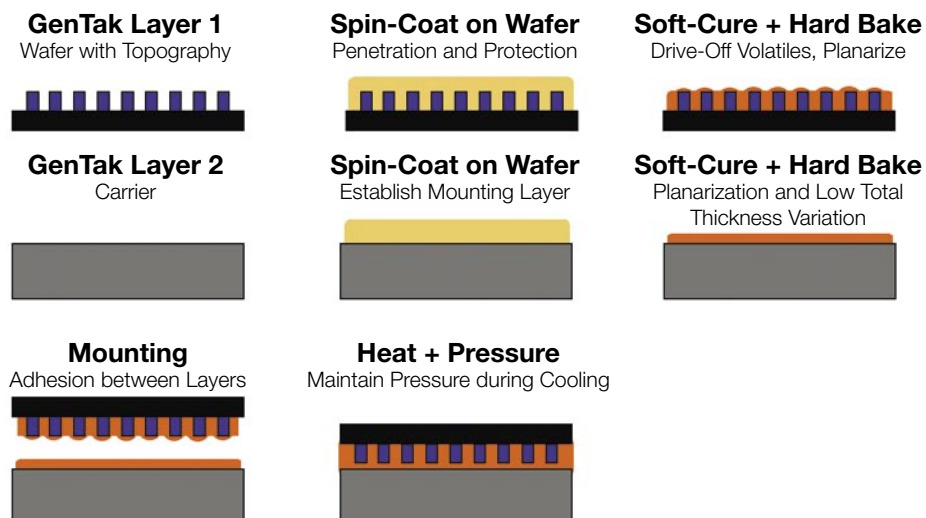
### GenTak 230 Spin-On Adhesive Coating and Mounting Model Perforated Carrier

The following model represents the example of a double coat of **GenTak 230** applied to the topography surface of a wafer and then mounted to a perforated carrier substrate.



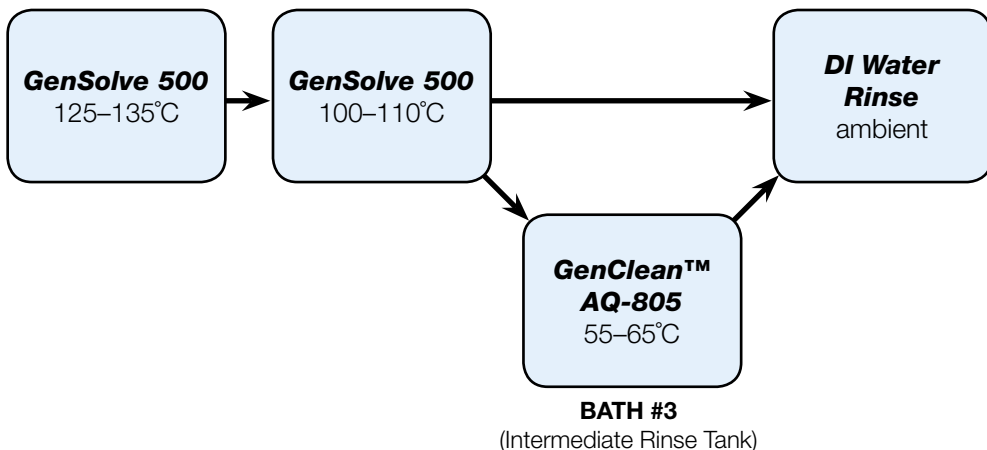
### GenTak 230 Spin-On Adhesive Coating and Mounting Model Non-Perforated Carrier

The following model represents the example of a single coat of **GenTak 230** applied to the topography surface of a wafer and then mounted to a non-perforated carrier substrate which has also been coated and initially cured.



**GenTak 230** has robust characteristics for multiple thinning techniques such as grinding, chemical thinning, chemical mechanical polishing or a combination of these techniques.

**GenSolve™ 500** photoresist stripper/polymer remover is designed to remove **GenTak 230** quickly, which leaves a clean surface free of particles and contamination. **GenSolve 500** is capable of demounting the thinned wafer from the substrate in 30 minutes to a few hours, depending on the bath temperature and the use of ultrasonics.



**GenSolve™ 750** photoresist stripper/polymer remover is available as an alternative formulation to **GenSolve™ 500** for effective demounting and cleaning.

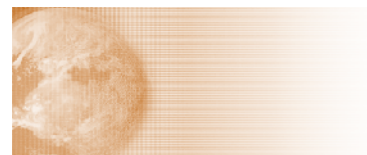
**GenClean™ AQ-805** aqueous cleaning agent is available for an optional clean step depending on process conditions and requirements.

## For more information

Contact us to learn more about **GenTak 230** and our formulated cleaning agents, high-purity solvents, acids and etchants. Also, ask us about our ability to support you with customized products, process development and other essential services.

All information, statements, data, advice and/or recommendations, including, without limitation, those relating to storage, loading/unloading, piping and transportation (collectively referred to herein as "information") are believed to be accurate and reliable. However, no representation or warranty, express or implied, is made as to its completeness, accuracy, fitness for a particular purpose or any other matter, including, without limitation, that the practice or application of any such information is free of patent infringement or other intellectual property misappropriation. General Chemical is not engaged in the business of providing technical, operational, engineering or safety information for a fee, and, therefore, any such information provided herein has been furnished as an accommodation and without charge. All information provided herein is intended for use by persons having requisite knowledge, skill and experience in the chemical industry. General Chemical shall not be responsible or liable for the use, application or implementation of the information provided herein, and all such information is to be used at the risk, and in the sole judgment and discretion, of such persons, their employees, advisors and agents.

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