



# BrewerBOND<sup>®</sup> 701

## Temporary Wafer Bonding Laser Release Material

BrewerBOND<sup>®</sup> 701 material is suitable for all production environments due to its high throughput and no-stress separation. The material was created for applications where higher temperature stability and lower total thickness variation (TTV) requirements are needed for downstream processing. BrewerBOND<sup>®</sup> 701 material is complementary to a wide variety of adhesive platforms and is an alternative technology to using mechanical debonding processes.

### BENEFITS

- Compatible with high-temperature backside processing  $\leq 400^{\circ}\text{C}$
- Enables no-stress separation from carrier at room temperature
- Enables alternative processes, including selective debonding when used with other release layers
- Enables rapid debonding with excimer laser equipment

### MARKET SECTORS

- Silicon interposer as bridge technology to initiate 3-D packaging
- eWLB (FIWLP & FOWLP)
- Memory
- Compound semiconductor

### LASER RELEASE METHOD

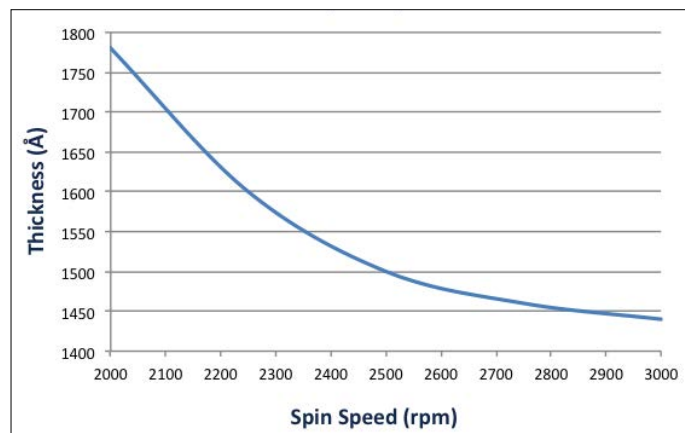
*Distinctive characteristics of the laser release method:*

- Maximum throughput of up to 50 wafers per hour
- Low-stress release, making it suitable for all production environments
- Release upon excimer laser exposure - no force used
- Ideal for high-volume production

The laser release throughput makes it a good choice for high-volume production goals. This method works for all production environments.

### PROCESSING

#### Spin Speed Curve (SSC)



#### Coating Parameters (8" substrate)

Dispense: Static in center of substrate  
 Spin Speed: SSC provided for thickness target  
 Acceleration: 5,000 rpm/s  
 Spin Time: 60 s

#### Hot Plate Baking Process

Contact Bake: 300°C for 5 min

#### Laser Debonding Parameters

*\*Information based on performance using SUSS or Kingyup laser debonding tool:*

Step-and-repeat scan method  
 Spot size: 12.5 mm x 4 mm  
 190 mJ/cm<sup>2</sup> to 250 mJ/cm<sup>2</sup>

#### Cleaning

*\*Coating can be removed by an oxidizing plasma or an oxidizing solvent stripping process such as ozone plasma stripping, Piranha solution, or RCA cleaning.*

#### Dynamic Viscosity

~7.32 cP at 25°C (77°F) tracking

#### Material Properties

n at 248 nm: 1.882  
 k at 248 nm: 0.274

n at 308 nm: 1.979  
 k at 308 nm: 0.138

n at 355 nm: 1.840  
 k at 355 nm: 0.030

Cauchy A: 1.64  
 Cauchy B: 0.0179  
 Cauchy C: 0

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