

## Spin-on Glass Zn-245HP

<b>Elements of Interest</b> Si, Zn, O, Cl	<b>Key Element atoms/cm<sup>3</sup></b> Zn, $2 \times 10^{21}$	<b>Key Element % in Film</b> Zinc
<b>Viscosity, <math>\eta</math> (635nm)</b> 0.90 cps, 1.48	<b>Thickness</b> Coats 1800 Å at 3000 rpm	<b>Shelf Life</b> 20°C 3 months 4°C 9 months

### Benefits

- Diffusion barrier to avoid out gassing of doping material from substrate
- For final target concentration ranges from  $2 \times 10^{16}$  to  $2 \times 10^{18}$  of Zinc
- Uniform Coatings
- Available with impurity specification of less than 1 ppm or less than 50 ppb
- Lower melting point than silica alone

### Typical Application

The concentration of the source for driving-in is typically high, in the range of  $2 \times 10^{21}$  Zn atoms/cm<sup>3</sup>. Thus leaving a high concentration of dopant right at the surface. During the drive-in procedure, the dopant diffuses into the substrate. It is also at risk to diffuse out of the substrate since it is so near the surface. Keeping a capping layer with dopant can prohibit the loss of the doping species. The basic capping layer can be a silicate layer such as NDG-2000. Zn-245 adds a level of dopant consistent with the final desired concentration. This addition of Zinc eliminates any concentration gradient that may exist and prohibits the loss of zinc through the surface layer.

### Packaging

- 240ml
- 500ml
- 1 l
- 2.5 l
- 4 l

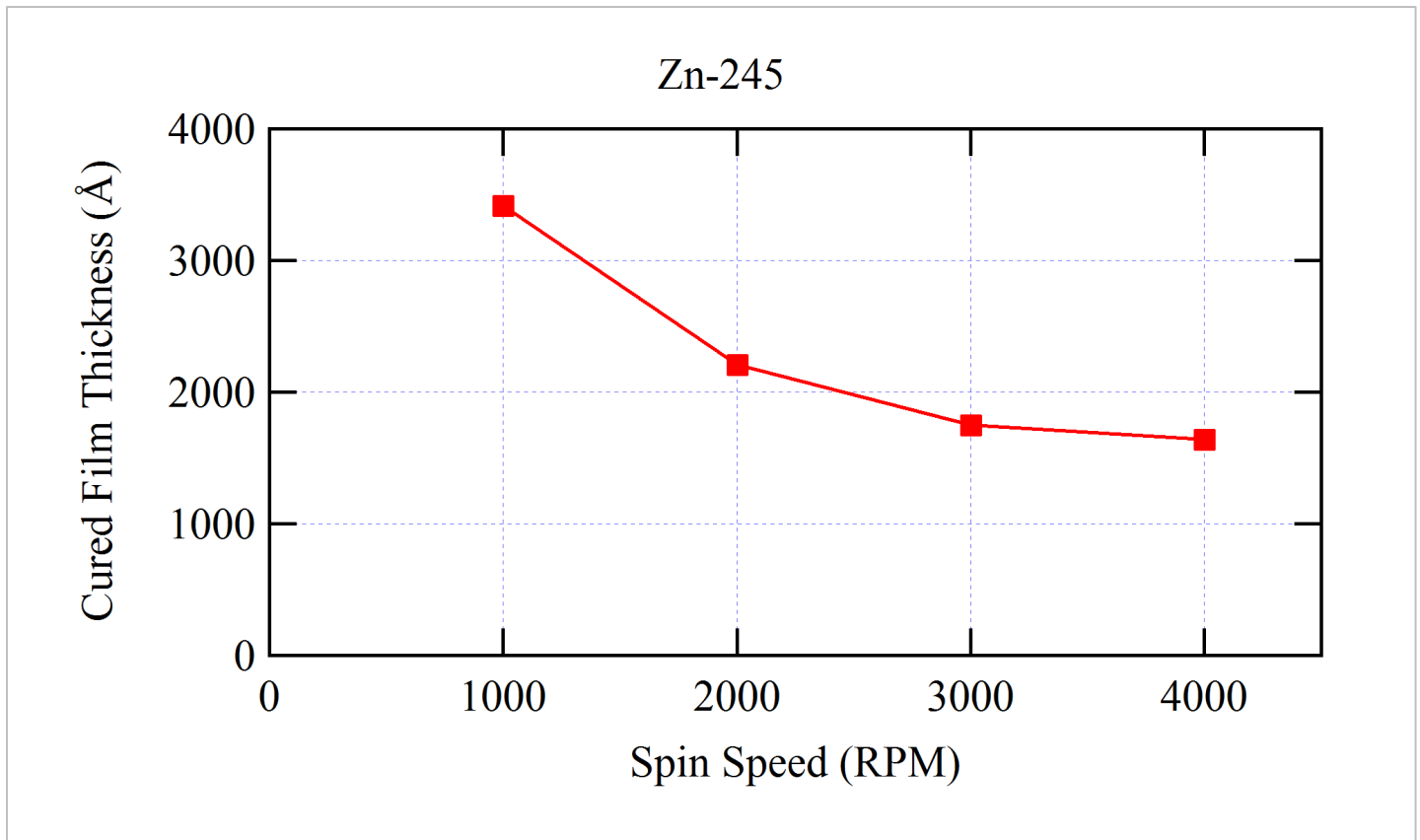
### Alternative Products

NDG-2000  
Zn-640  
Zn-655  
Other target concentration levels available

### Alternate Elements

- As
- Sb
- Bi
- Other elements available for compound semiconductor use

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