

# Spin-on-Glass Zn-655

<b>Elements of Interest</b> Si, Zn, O	<b>Key Element atoms/cm<sup>3</sup></b> Zn, 4E+21	<b>Key Element % in Film</b> Zn
<b>Viscosity</b> 0.9 cps	<b>Thickness</b> Coats 2500 Å at 3000 rpm Refractive Index = 1.5	<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 5E+17 to 5E+19 of Zinc
- Uniform Coatings
- High purity materials
- 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 4E+21 this leaves a high concentration of dopant right at the surface. During drive in 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-640 adds a level of dopant consistent with the final desired concentration. Zn-640 has a film concentration of 4E+21 Zinc atoms per cubic centimeter. 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

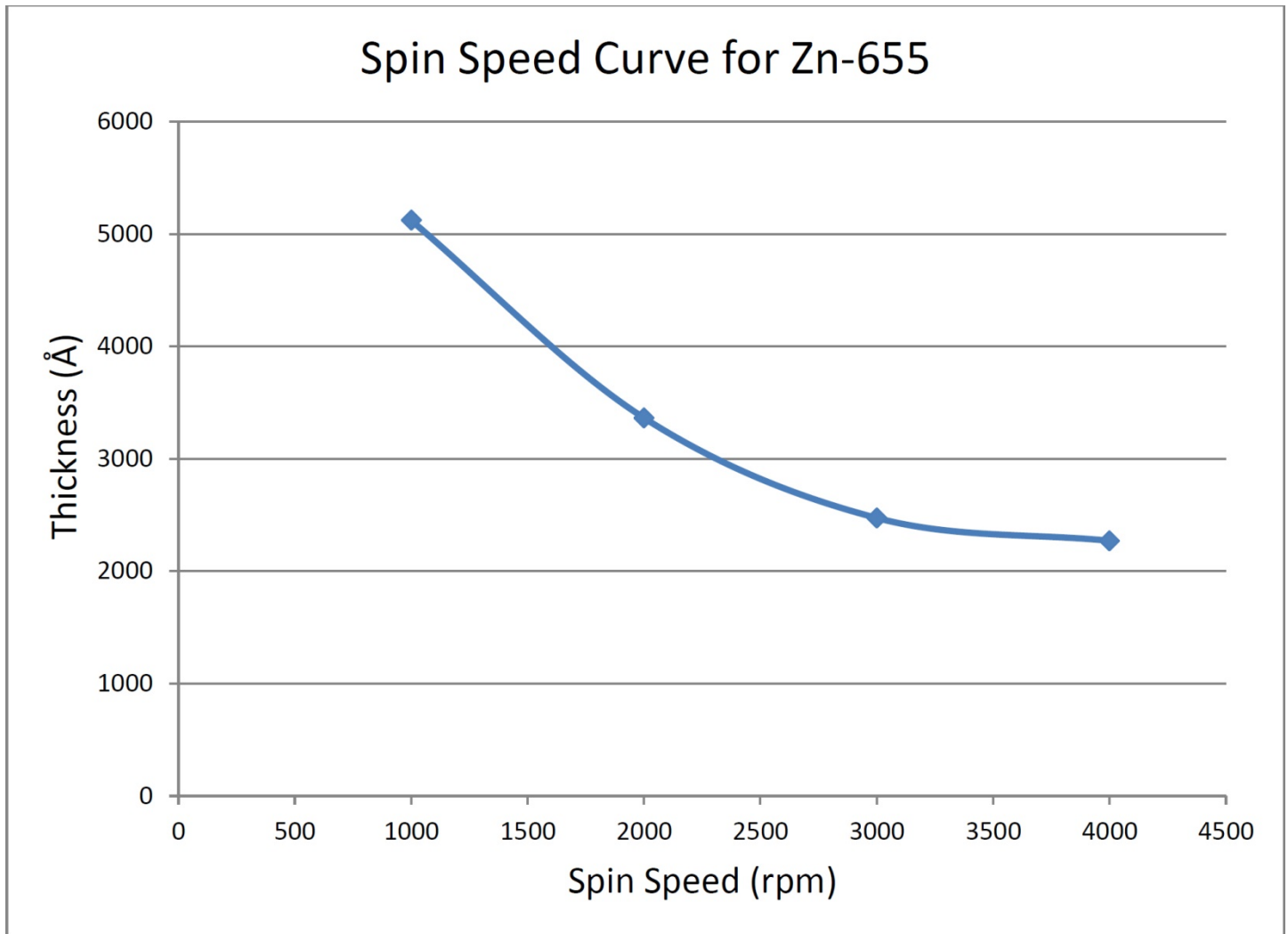
## Alternative Products

NDG-2000  
Other target concentration levels available

## Elements Available to Add

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

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