

# Spin-on Glass ZnAs-650

<b>Elements of Interest</b> Si, Zn, As	<b>Key Element atoms/cm<sup>3</sup></b> Zn, $5 \times 10^{21}$ As, $1 \times 10^{21}$	<b>Key Element % in Film</b> Zinc, Arsenic
<b>Viscosity, n (635nm)</b> 0.90 cps, 1.48	<b>Thickness</b> Coats 2100 Å at 3000 rpm Refractive Index = 1.486	<b>Shelf Life</b> 20°C 3 months 4°C 9 months

## Benefits

- High zinc concentration coupled with arsenic diffusion barrier to avoid out gassing of doping material from substrate
- For final target concentration ranges from  $5 \times 10^{17}$  to  $5 \times 10^{19}$  of Zinc and Arsenic
- 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  $5 \times 10^{21}$  Zn atoms/cm<sup>3</sup> and  $1 \times 10^{21}$  As 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.

Keeping a doping layer with substrate dopant in it can prohibit the loss of the doping species as 3-5 and 2-6 substrates tend to partially decompose during the higher temperature diffusion process (compensates for out diffusion of As from GaAs for example).

## Packaging

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

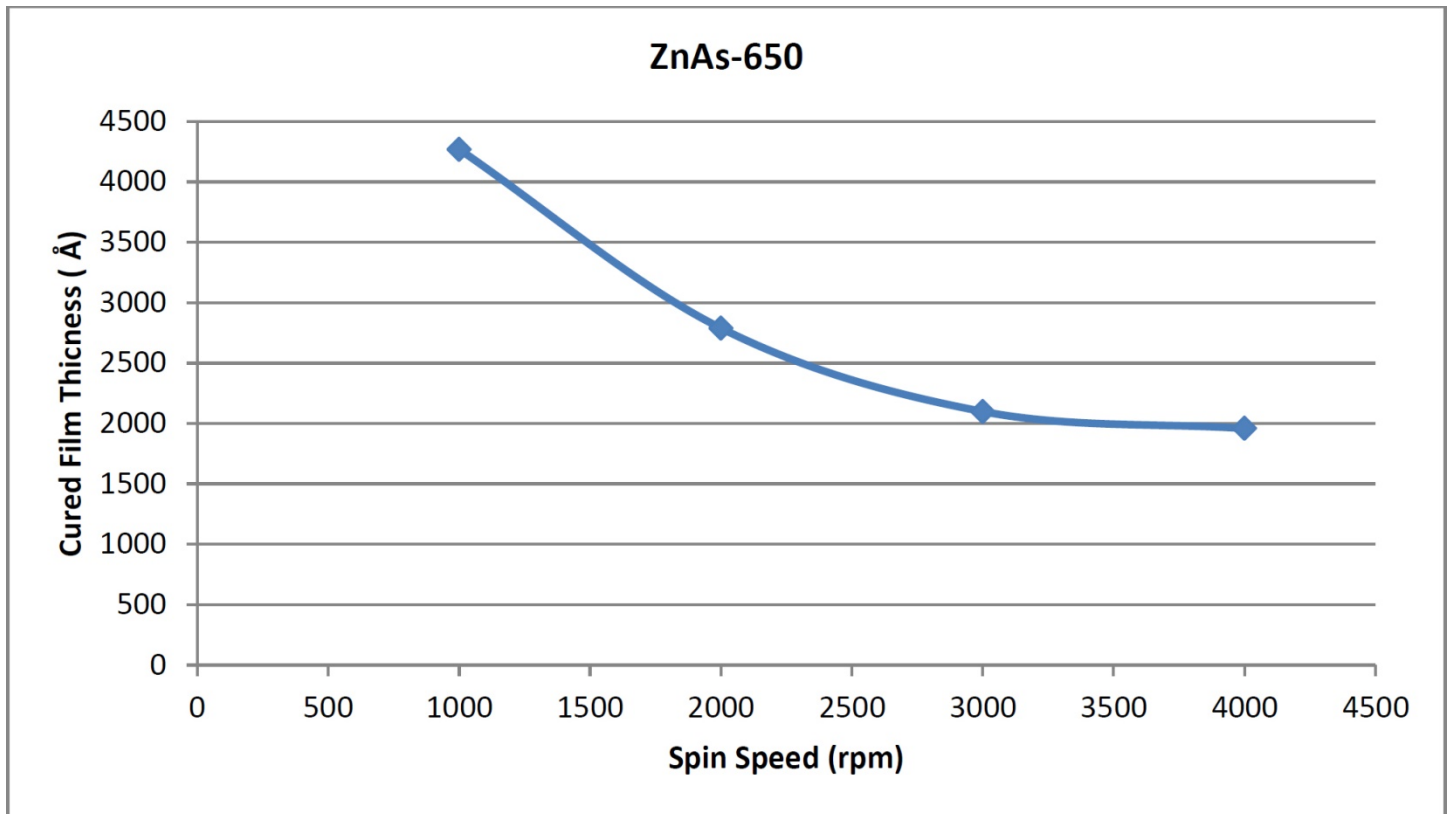
## Alternative Products

- Zn640
- Zn-655
- ZnAsP-320
- Other target concentration levels available

## Alternative Elements

- S
- Se
- Te
- Other elements available for compound semiconductor use

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