

Honeywell
ACCUSPIN[®] Arsenic
Spin-on Dopant

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POLYMERS FOR N-TYPE BURIED LAYER DIFFUSION

BENEFITS

- Industry proven performance in analog CMOS, DMOS and bipolar devices
- Lower maintenance costs than arsine gas or arsenic trioxide solid sources
- Better control of sheet resistance non-uniformity to within 1% within a wafer and 2% wafer to wafer
- Safer to handle and use than gas or solid arsenic sources

OVERVIEW

The ACCUSPIN arsenic Spin-on dopants (AS-5CE, AS-120 and AS-120 4:5) series is an arsenic doped silicon oxide polymer family designed for buried layer diffusion and polydoping. ACCUSPIN arsenic Spin-on dopants have been in large volume IC production for over 25 years.

All three arsenic products can be applied using standard spin coaters. ACCUSPIN arsenic Spin-on dopants reduce the need for costly diffusion furnace tube cleaning and replacement required when using arsine or arsenic trioxide dopants.

Because ACCUSPIN arsenic Spin-on dopants are arsenosilicate materials, diffusion is more uniform during the drive-in process so sheet resistance and junction depths are repeatable. The use of a Spin-on process eliminates non-uniformity issues due to changes in gas flows of arsine and arsenic trioxide vaporization sources, or differing sheet resistance from wafer placement in the diffusion furnace.

Thickness

Product	Thickness Range
AS-5CE	2,700Å – 3,100Å
AS-120	1,100Å – 2,000Å
AS-120 4:5	940Å – 1,100Å

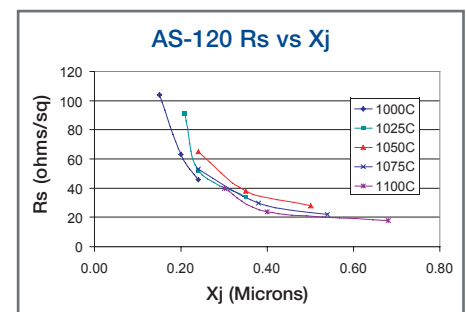
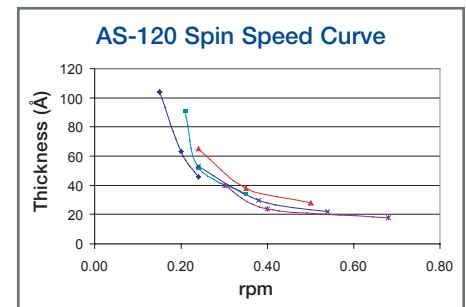
APPLICATIONS

- Bipolar
- Analog CMOS
- DMOS

ACCUSPIN arsenic Spin-on dopants provide excellent sheet resistance non-uniformity within the wafer (1%) and from wafer to wafer (2%). ACCUSPIN arsenic Spin-on dopants have been used in analog CMOS, DMOS and Bipolar device production around the world.

FEATURES

Sheet Resistance vs Junction Depth



Material Properties

AS-5CE Shelf Life @ 0-4°C: 3 months
 AS-120 Shelf Life @ 0-4°C: 6 months
 AS-120 4:5 Shelf Life @ 0-4°C: 6 months
 Bottle Sizes Available
 125ml, 250ml, 500ml, 1L, 4L



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OUR COMMITMENT TO SUSTAINABILITY

Honeywell Electronic Materials

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