

**Honeywell  
ACCUSPIN® Phosphorus  
Spin-on Dopant**

# Honeywell ACCUSPIN® Phosphorus Spin-on Dopant

## POLYMERS FOR ALL N-TYPE DIFFUSION

### BENEFITS

- Industry proven performance in analog CMOS, power, discrete and bipolar devices
- Lower maintenance cost than gas or liquid sources
- Unlike  $\text{POCl}_3$ , there are no special regulatory and customs importation or shipping requirements
- Less toxic than  $\text{POCl}_3$ ; no formation of phosphoric or hydrochloric acid

### OVERVIEW

ACCUSPIN phosphorus Spin-on dopants (P-8545 and P-854 2:1) are phosphorus doped silicon oxide polymers designed for n-type base diffusion, n-type emitter diffusion, solar cell doping and poly doping. ACCUSPIN phosphorous Spin-on dopants have been in large volume IC production for over 25 years.

The entire ACCUSPIN phosphorous Spin-on family can be applied using standard spin coaters. ACCUSPIN phosphorus Spin-on dopants reduce the need for costly diffusion furnace tube cleaning or replacement required when using gas or liquid phosphorus dopants.

Because ACCUSPIN phosphorus Spin-on dopants are phosphosilicate 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 phosphorus sources or differing sheet resistance from placement in the diffusion furnace.

In addition, there are no customs and regulatory issues with importation or shipping of ACCUSPIN phosphorus Spin-on dopants; unlike the problems with shipping and importing  $\text{POCl}_3$ .

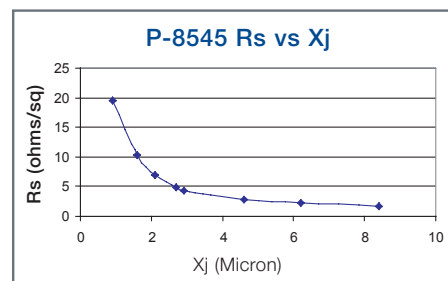
### APPLICATIONS

- Bipolar
- Analog CMOS
- Power

ACCUSPIN phosphorus Spin-on dopants provide excellent sheet resistance non-uniformity within the wafer (1%) and from wafer to wafer (2%). ACCUSPIN phosphorus Spin-on dopants have been used in analog CMOS, power, and bipolar device production around the world. ACCUSPIN P-854 2:1 has also been designed for spray coating applications for solar cell production.

### FEATURES

#### Sheet Resistance vs Junction Depth



#### Thickness

Product	Thickness Range
P-8545	2,045Å – 2,450Å
P-854 2:1	1,340Å – 1,640Å

#### Material Properties

P-8545 Shelf Life @ 0-4°C: 6 months  
P-854 2:1 Shelf Life @ 0-4°C: 9 months  
Bottle Sizes Available  
125ml, 250ml, 500ml, 1L, 4L



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OUR COMMITMENT TO SUSTAINABILITY

#### Honeywell Electronic Materials

USA: 1-509-252-2102

China: 86-21-28942481

Germany: 49-5137-999-9199

Japan: 81-3-6730-7092

Korea: 82-2-3483-5076

Singapore: 65-6580-3593

Taiwan: 886-3-6580300 ext.312

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