

Honeywell
ACCUSPIN® Boron
Spin-on Dopant

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POLYMERS FOR ALL P-TYPE DIFFUSION

BENEFITS

- Industry proven performance in analog CMOS, power, discrete and bipolar devices
- Lower maintenance cost than gas or liquid sources
- Lower cost of ownership than source wafer doping or outsourced ion implanting
- Better control of sheet resistance non-uniformity to within 1% within a wafer and 2% wafer to wafer

OVERVIEW

The ACCUSPIN B-XXX Spin-on dopant series are borosilicate (B-30, B-40, B-60) and boron nitrogen (B-75X, B-150) polymers designed for p-type base, isolation, p-type emitter diffusion, diode and deep p junction diffusion. The B-XXX series has been in large volume IC production for over 25 years. B-XXX can be applied using standard spin coaters.

ACCUSPIN B-XXX materials provide a lower cost of ownership than other dopant sources and reduce the need for costly diffusion furnace tube cleaning or replacement, required when using gas or liquid boron dopants.

Because the B-XXX materials are Spin-on borosilicates or boron nitrogen, 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 boron sources and differing boron sheet resistance from placement in the diffusion furnace.

A Spin-on process also increases diffusion furnace throughput because every wafer boat slot can be used for production wafers.

APPLICATIONS

- Bipolar
- Analog CMOS
- Discretes
- Power

ACCUSPIN B-XXX materials provide excellent sheet resistance non-uniformity within the wafer (1%) and from wafer to wafer (2%). The B-XXX series has been used in analog CMOS, power, discrete and bipolar device production around the world.

FEATURES

Thickness

Product	Thickness Range
B-30	4,100Å – 5,100Å
B-40	5,170Å – 5,570Å
B-60	4,400Å – 4,950Å
B-75X	2,900Å – 3,600Å
B-150	4,500Å – 5,100Å

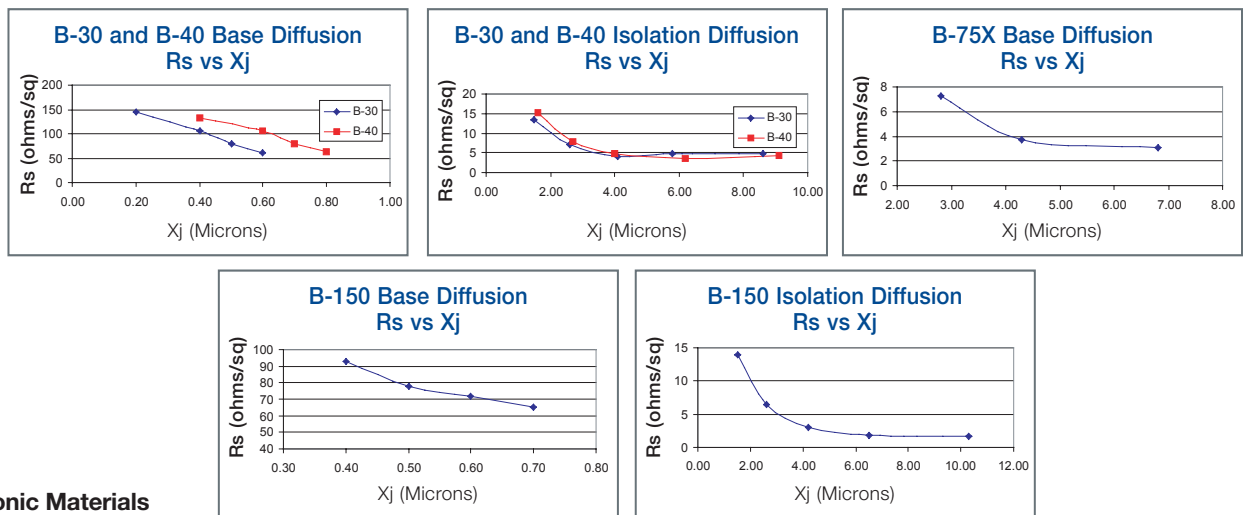
Material Properties

B-30 Shelf Life @ 0-4°C:	6 months
B-40 Shelf Life @ 0-4°C:	4 months
B-60 Shelf Life @ 0-4°C:	3 months
B-75X Shelf Life @ 20°C:*	6 months
B-150 Shelf Life @ 20°C:*	12 months

*Room Temperature

Bottle Sizes Available
125ml, 250ml, 500ml, 1L, 2L, 4L

Sheet Resistance vs Junction Depth



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
www.honeywell.com/sm/em

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