

BPS-729-B

Surfactant-Formulated Dicing Solution

BPS-729-B is a surfactant-formulated solution that is used as an additive to DIW during the dicing process for high-performance cleaning through superior wetting.

In addition to preventing adherence of silicon particles and swarf (saw residue) on Al and Cu substrates, BPS-729-B can also remove oxidation from bond pads. Because of the very low etch rate on various base materials, these substrates are not affected.

BPS-729-B is recommended for use between 500:1 and 2000:1 for standard dicing application, and at stronger concentrations for Copper Oxide removal applications.

BPS-729-B treatment is typically followed by a DI water rinse and dry as is normally performed within the dicing machine or on a standalone tool.

BENEFITS

- Room temperature application
- Does not attack the base metal
- Works on Cu, Al, Sn, among others
- Eliminates the need for scrubbing the wafer post-saw
- Eliminates the need for CO₂ sparged DIW
- High conductivity even at high dilutions which helps to dissipate electrostatic charge on ESD-sensitive devices
- surface tension even at high dilutions which promotes excellent swarf and particle removal
- Removes oxides that lead to poor wire bonding

TYPICAL PHYSICAL PROPERTIES

Form: Liquid

Color: Clear

Density: 64.301 lb/ft³ (1.03 g/cm³)

pH: 5.5 – 6.5

MATERIAL COMPATIBILITY

Wetted Parts

- High-density polyethylene (HDPE)
- PFA
- PTFE
- PVDF
- Polypropylene
- 316L Stainless Steel

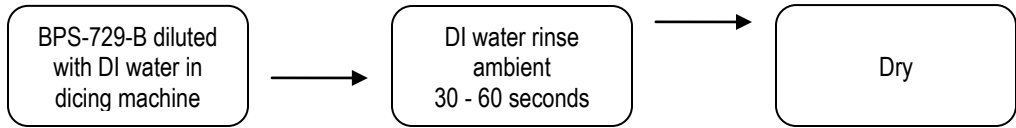
O-Rings

- FEP Encapsulated Viton¹
- Kalrez¹
- EPR

BPS-729-B

RECOMMENDED INSTRUCTIONS FOR USE

The dicing process with BPS-729-B is recommended to be followed up with a short (30 – 60s) DIW rinse and dry

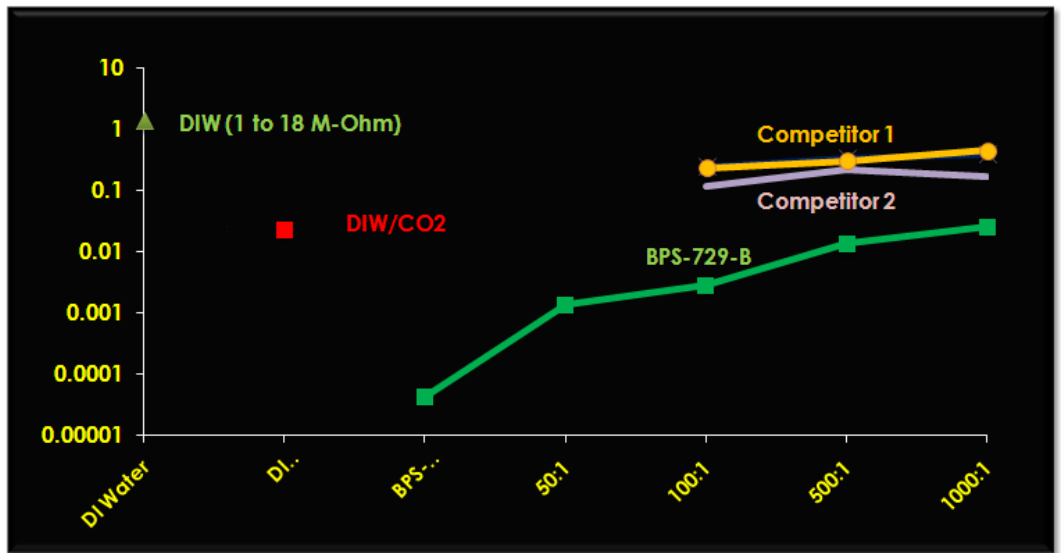


ETCH RATES

Etch Rates; A/min. @ 500:1 dilution; 25°C			
Al	Cu	SiN	TiN
< 1	< 1	TBD	TBD

PERFORMANCE DATA

Resistivity versus Dilution against CO2-sparged DIW and competitive products

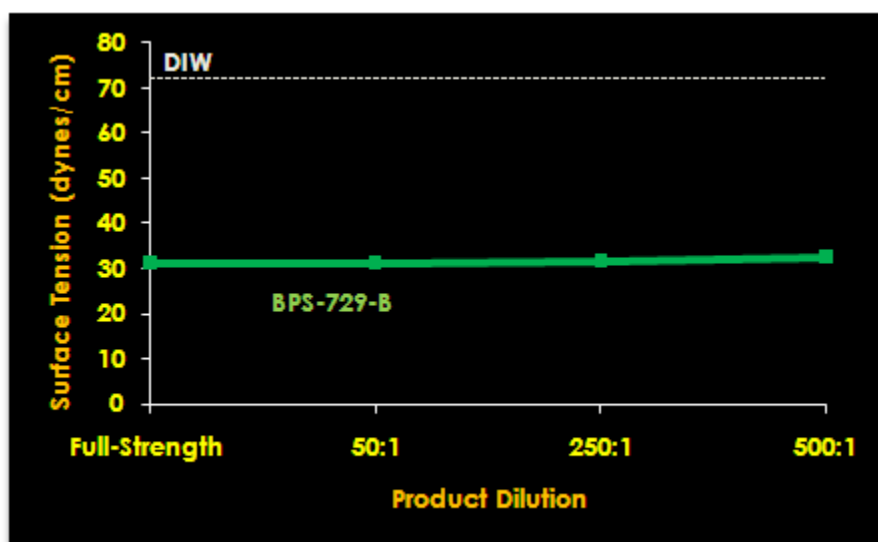


BPS-729-B reduces resistivity of DIW more effectively than CO2 and the competition!

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Surface Tension versus Dilution

Product Dilution	BPS-729-B Surface Tension (dynes/cm)
Full-Strength	31.2
50:1	31.3
250:1	31.8
500:1	32.6
1000:1	34.7



BPS-729-B cleans primarily due to wetting efficiency of surfactants.

pH versus Dilution

Dilution	pH
No dilution	5.7
50:1	6.4
100:1	6.5
250:1	6.6
500:1	6.6
1000:1	6.6

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STORAGE, HANDLING and PROTECTIVE CLOTHING

Contact the Air Products Technical Center at 1-800-752-1597 or gastech@airproducts.com for a MSDS.

For More Information

If you would like additional information or technical assistance in preparing specific formulations, email or call Air Products and Chemicals, Inc. at the following locations:

Sales Information – North America

Attention: Chuck Lhota

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