



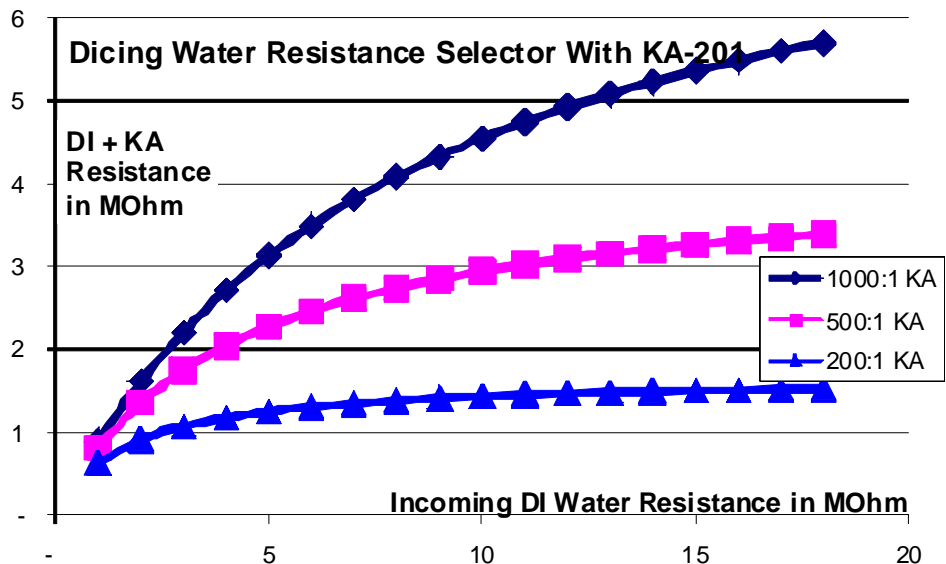
KerfAid™ Application Note

Controlling the Conductivity of Saw Dicing Water

The conductivity of DI water used as a coolant for the dicing process has a major impact on the quality of the dicing process. The most common problems solved by controlling DI water conductivity are: bond pad corrosion and bond pad staining.

Determining How Much KerfAid to Use

Controlling conductivity is performed by adding the required amount of KerfAid to the DI water. To determine how much KerfAid is required, locate the DI water resistivity on the X axis of the chart below. Next, locate the required resistivity of the DI water in the Y axis of the chart. Where these two intersect determines the ratio of KA-201 required.



Conductivity vs Resistivity

	Symbol	Units
Conductivity	C	μS
Resistivity	R	MΩ
Formula	R = 1/C	

Resistivity is the inverse of conductivity

For example 5 MΩ = 0.2 μS

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Bond Pad Corrosion

Bond pad corrosion takes place where slight imperfections in the bond pad allow two dissimilar metals to come in contact with DI water. This leads to galvanic corrosion of the bond pad resulting poor wire bonds.

Bond Pad Staining

Bond pad staining occurs when the electrostatic charge generated by the saw blade attracts silicon particles to the bond pads. Controlling conductivity reduces the electrostatic charge, the staining of the bond pads and reduces wire bond failure.

Typical Physical Properties

Typical Physical Properties	Value
Specific Gravity @ 25°C	1.01 - 1.05
Solubility @25°C in Water, % by weight	100
Viscosity @20°C, cSt	11.54
Flash Point, °C	N/A
Vapor Pressure @25°C, mmHg	23.8
Volatiles (EPA Method 24), wt %	Negligible
Surface Tension@25°C, mN/m	31-36
Color	Pink
Odor	Mild
Conductivity, μ S/cm	120
Ph	7 - 9.5

Safety

Because KerfAid has a low order of toxicity, it does not require special handling. Always use good industrial hygiene and safety practices. See MSDS for complete safety, handling, storage and disposal information.

Storage

KerfAid should be stored away from direct sunlight. Proper storage temperatures range from 5°C to 32°C. Do not store under freezing conditions. KerfAid has a shelf life of 2 years.

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