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# **CONDUCTIVITY ELECTRODES**

## **Sensitivity-Material Selection**

When selecting the electronics to go with your conductivity level switch probe, it is important to have the proper sensitivity for the liquid being measured.

For the electronics, the sensitivity is listed as "Max. Media Resistance" in ohms. If the "Max. Media Resistance" in ohms is greater than the ohms/cm listed

in the table, your electronics will be sensitive enough to sense the level of the liquid.

Liquid Or Material	Sensitivity-Conductivity		Electrode Material	
	Ohms/cm	Micro-Mhos/cm	Good*	Better**
†Acids	Consult Factory		Consult Factory	
Aluminum Hydroxide	2.2 K	450	316 SS	Titanium
Aluminum Sulfate	2.2 K	450	303 SS	Hastelloy C
Ammonia	5 K	200	316 SS	N.A.
Ammonium Chloride	1 K	1 K	316 SS	Titanium
Ammonium Hydroxide	10 K	100	316 SS	Titanium
Ammonium Nitrate	18 K	50	303 SS	316 SS
Ammonium Sulfate	10 K	100	316 SS	Titanium
Baby Foods	1 K	1 K	303 SS	316 SS
Barium Chloride	1 K	1 K	Carpenter 20	N.A.
Barium Nitrate	1 K	1 K	316 SS	N.A.
Beer	2.2 K	450	303 SS	316 SS
Black Liquor	1 K	1 K	Consult Factory	
Borax-Aqueous	10 K	100	Brass	303 SS
Bourbon	200 K	5	N.A.	316 SS
Brine	1 K	1 K	N.A.	Hastelloy C
Buttermilk	1 K	1 K	N.A.	316 SS
Cadmium Chloride	1 K	1 K	316 SS	N.A.
Cadmium Nitrate	1 K	1 K	316 SS	N.A.
Cake Batter	5 K	200	303 SS	316 SS
Calcium Chloride	1 K	1 K	Carpenter 20	Hastelloy C
Calcium Hydroxide	10 K	100	316 SS	Titanium
Catsup	2.2 K	450	303 SS	316 SS
Caustic Soda	1 K	1 K	316 SS	Hastelloy B
Cement Slurry	5 K	200	303 SS	316 SS
Coffee	2.2 K	450	303 SS	316 SS
Corn Syrup	45 K	21	303 SS	316 SS
Corn—Cream Style	2.2 K	450	303 SS	316 SS
Ferric Chloride	10 K	100	N.A.	Titanium
Ferrous Sulfate	10 K	100	Carpenter 20	Titanium
Ink (Water Base)	2.2 K	450	N.A.	316 SS
Jams/Jellies	45 K	21	303 SS	316 SS
Juices—Fruit/Vegetable	1 K	1 K	303 SS	316 SS
Lithium Chloride	1 K	1 K	N.A.	Carpenter 20
Magnesium Chloride	1 K	1 K	316 SS	Carpenter 20
Magnesium Hydroxide	2.2 K	450	316 SS	N.A.
Mayonnaise	5 K	200	303 SS	316 SS
Mercuric Chloride	90 K	11	N.A.	Titanium
Milk	1 K	1 K	303 SS	316 SS
Molasses	10 K	100	303 SS	316 SS
Mustard	1 K	1 K	303 SS	316 SS
Oil—Soluble	10 K	100	N.A.	303 SS
Paper Stock	5 K	200	Titanium	N.A.
Photographic Solutions	1 K	1 K	316 SS	Hastelloy C
Plating Solutions	2.2 K	450	N.A.	316 SS
Potassium Chloride	1 K	1 K	316 SS	Titanium
Salts—Chemical	2.2 K	450	Monel	N.A.
Sewage	5 K	200	303 SS	316 SS
Silver Nitrate	1 K	1 K	316 SS	Carpenter 20
Soap Foam	18 K	50	303 SS	316 SS
Sodium Carbonate	2.2 K	450	316 SS	Monel
Sodium Hydroxide	1 K	1 K	316 SS	Hastelloy B
Soups	1 K	1 K	303 SS	316 SS
Starch Solutions	5 K	200	303 SS	316 SS
Sugar Solutions	90 K	11	303 SS	316 SS
Vinegar—Aqueous	2.2 K	450	316 SS	Carpenter 20
Water—Carbonated	3 K	330	303 SS	316 SS
Water—Condensate	18 K	50	Brass	303 SS
Water—Chlorinated	5 K	200	316 SS	Monel
Water—Distilled	450 K	2	Brass	303 SS
Water—Deionized	2.0 M	.5	Brass	303 SS
Water—Hard/Natural	5 K	200	Brass	303 SS
Water—Salt	2.2 K	450	Monel	N.A.
Wine	2.2 K	450	303 SS	316 SS
Zinc Chloride	1 K	1 K	Carpenter 20	Titanium
Zinc Sulfate	2.2 K	450	316 SS	Titanium

\*Less than .020" erosion per year.

\*\*Less than .002" erosion per year.

†Note: Liquid concentration and temperature will affect conductivity and material erosion rate. Consult factory for detailed information.

N.A.—No material available with this erosion rate.