



## Plant-Prod Solutions Conductivity (mmhos)

Parts per Million Nitrogen	No Stretch 15-0-20	Complete 17-5-17	pH Reducer 18-9-18	pH Buffer 18-6-24	Fusion 17-5-17	Fertility Plus 19-2-19	Total Plus 19-8-13
50	0.45	0.38	0.37	0.38	0.43	0.37	0.28
100	0.91	0.71	0.72	0.76	0.78	0.73	0.57
150	1.37	1.03	1.06	1.14	1.12	1.09	0.85
200	1.83	1.36	1.40	1.52	1.47	1.44	1.13
250	2.28	1.69	1.74	1.89	1.81	1.79	1.41
300	2.72	2.01	2.07	2.26	2.16	2.13	1.68
350	3.16	2.34	2.40	2.63	2.50	2.47	1.95
400	3.60	2.66	2.73	3.00	2.85	2.81	2.21
450	4.03	2.99	3.05	3.36	3.19	3.15	2.48
500	4.45	3.32	3.38	3.72	3.54	3.48	2.74
550	4.87	3.64	3.70	4.08	3.88	3.80	3.00
600	5.28	3.97	4.01	4.44	4.23	4.12	3.25

### Conductivity

Total soluble salts is a measure, in the form of electrical conductivity, of the amount of fertilizer in solution. Most nutrients or other elements that are soluble will contribute to the conductivity of the solution. The electrical conductivity (EC) increases as the fertilizer concentration is increased. Electrical conductivity is measured in mhos. The conductivity of fertilizer solutions is sufficiently small that it is measured in terms of millimhos (mmhos, one one-thousandth of a mho) or micromhos ( $\mu$ mhos, one one-millionth of a mho). Conductivity meters measure in either mmhos or  $\mu$ mhos. Since most meters used by our growers are calibrated in mmhos, the data given here on our fertilizers uses the same measurement.

These tables can be used to measure the accuracy of fertilizer injector systems by following these steps:

- (1) Take a conductivity reading of clear irrigation water.
- (2) Take a conductivity reading of final fertilizer solution.
- (3) Subtract the conductivity reading value of clear water from the conductivity reading of fertilizer solution.
- (4) Compare the answer found in 3 to the corresponding value in the table in order to find the concentration of fertilizer.

**Example:** Conductivity of clear irrigation water is 0.60 mmhos.

Conductivity of the final fertilizer solution using 20-20-20 is 2.85 mmhos.

The conductivity due to the fertilizer is only 2.85 mmhos - 0.60 mmhos = 2.25 mmhos.

For 20-20-20, a conductivity reading of 2.25 mmhos corresponds to a feeding rate of 550 ppm of Nitrogen (N).

**Note:** The values on this chart were obtained under laboratory conditions using distilled water and a Plant Products conductivity meter. The values obtained by the grower under field conditions could vary slightly (+/-10%) from the values listed here.



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