



E S V Aquarium Products Inc.
www.esvaquarium.com

B-Ionic Seawater System Instructions

1. Using chart below, determine the size batch you would like to make. The chart formulas produce seawater at a salinity of approximately 34 ppt (1.0256 Specific Gravity @ 77 deg. F). Due to variations in user measurement technique and moisture content of our raw materials, we recommend starting with a 10% reduction in the required amount of RO/DI water. After all ingredients are mixed and dissolved, slowly mix in RO/DI water until desired salinity is achieved as per step 7
2. With each ingredient, decide whether to use volume measurement or weight measurement. Weight measurements, using a quality digital scale, will result in more accurate and consistent batches than volume measurements. All measurements requiring scoops and measuring spoons should be level.
3. Add Sodium Chloride and mix until dissolved.
4. Add Magnesium Sulfate and mix until dissolved.
5. After being certain above ingredients are completely dissolved, add Liquid Component A and mix for one minute. Rinse measuring beaker in tap water.
6. Add Liquid Component B and mix for one minute. Rinse measuring beaker in tap water.
7. Test and adjust salinity if necessary.
8. If uncertain about adequate dissolved oxygen, aerate or circulate for one hour minimum.

Final Batch Size		Water (RO/DI)	Sodium Chloride	Magnesium Sulfate	Liquid Component A	Liquid Component B
1.00 gals.	By Volume	.98 gals.	1/4 cup + 1 tsp.	1 tbsp. + 2 tsp.	1.28 fl. oz. (38 ml.)	0.64 fl. oz. (19 ml.)
	By Weight	8.16 lbs. (3.70 kg.)	91 grams	25 grams	49 grams	21 grams
5.00 gals.	By Volume	4.90 gals.	1 1/2 cups	1/2 cup	6.4 fl. oz. (189 ml.)	3.2 fl. oz. (95 ml.)
	By Weight	40.8 lbs. (18.5 kg.)	1 lb. (454 grams)	125 grams	243 grams	106 grams
10.00 gals.	By Volume	9.80 gals.	3 cups	1 cup	12.8 fl. oz. (378 ml.)	6.4 fl. oz. (189 ml.)
	By Weight	81.6 lbs. (37.1 kg.)	2 lbs. (908 grams)	250 grams	1.07 lbs. (486 grams)	212 grams
20.00 gals.	By Volume	19.6 gals.	6 cups	2 cups	25.6 fl. oz. (757 ml.)	12.8 fl. oz. (378 ml.)
	By Weight	163 lbs. (74 kg.)	4 lbs. (1.82 kg.)	1.1 lbs. (500 grams)	2.14 lbs. (972 grams)	425 grams
30.00 gals.	By Volume	29.4 gals.	9 cups	3 cups	38.4 fl. oz. (1135 ml.)	19.2 fl. oz. (568 ml.)
	By Weight	245 lbs. (111 kg.)	6 lbs. (2.72 kg.)	1.65 lbs. (750 grams)	3.21 lbs. (1.46 kg.)	1.40 lbs. (637 grams)
40.00 gals.	By Volume	39.2 gals.	12 cups	4 cups	51.2 fl. oz. (1514 ml.)	25.6 fl. oz. (757 ml.)
	By Weight	327 lbs. (148 kg.)	8 lbs. (3.63 kg.)	2.20 lbs. (1 kg.)	4.28 lbs. (1.94 kg.)	1.87 lbs. (850 grams)
50.0 gals.	By Volume	49.0 gals.	15 cups	5 cups	64 fl. oz. (1892 ml.)	32 fl. oz. (946 ml.)
	By Weight	408 lbs. (185 kg.)	10 lbs. (4.54 kg.)	2.75 lbs. (1.25 kg.)	5.35 lbs. (2.43 kg.)	2.34 lbs. (1.06 kg.)
100.0 gals.	By Volume	98 gals.	30 cups	10 cups	128 fl. oz. (3785 ml.)	64 fl. oz. (1892 ml.)
	By Weight	816 lbs. (370 kg.)	20 lbs. (9.08 kg.)	5.5 lbs. (2.50 kg.)	10.70 lbs. (4.86 kg.)	4.68 lbs. (2.12 kg.)