

7 FACTORS TO EVALUATE MARINE SALTS:

Package should be clearly labeled with:
1 the brand's name, the net weight, safety precautions, and the instructions for use.

The salt package should show the brand name, instructions for use, health & safety precautions and the net weight. Packages sold without these basic essential requirements and/or marked "not for resale" should be dismissed.

Regardless of the cost and outer shipping container, identifying the brand, contents, and amount of the purchased salt is essential. Instructions printed directly on each individual package is the most helpful.

Without the net weight clearly marked on each package, consumers are unable to estimate exactly how much usable solution can be made. In many US and international locations, selling mixed chemistry without the accurate net weight clearly marked on each package is unlawful. This is true, regardless of the industry or type of product.

If a package is marked "not for resale", that item was not intended to be sold or resold. Many buyers of such items are thinking they are purchasing "via the back door", "under the table" or with a "secret discount". Products with these types of questionable markdowns, regardless of industry or intended end use, are targeting the lowest segment of the market.

Disclaimers are obvious safeguards covering the manufacturer's liability and should be considered red flags to potential purchasers.

2 The net weight should be enough to produce the amount of saltwater advertised. Less is LESS.

A package of marine salt that claims to make 50 US gal / 189 L of saltwater should have a net weight of 15 lbs / 6.8 kg, in order to produce the solution with a specific gravity of 1.023 - 1.026 at 77° F / 25° C.

Most marine salts imported into the US as well as a few US made salts are physically underweight. Regardless of the cost and brand, additional amounts of salt must be purchased to make the desired amount of usable saltwater.

Marine salts that weigh 14 lbs / 6.3 kg or 14.5 lbs / 6.6 kg cannot make 50 US gallons / 189 L at the proper specific gravity. If underweight brands are used, the enduser must purchase additional packages of salt to make the actual amount of saltwater required. Thus, there is no advantage of purchasing an underweight marine salt, even at a discount.

150 US gal / 567.75 L requires 45 lbs / 20.45 kg of salts

200 US gal / 757 L requires 60 lbs / 27.27 kg of salts

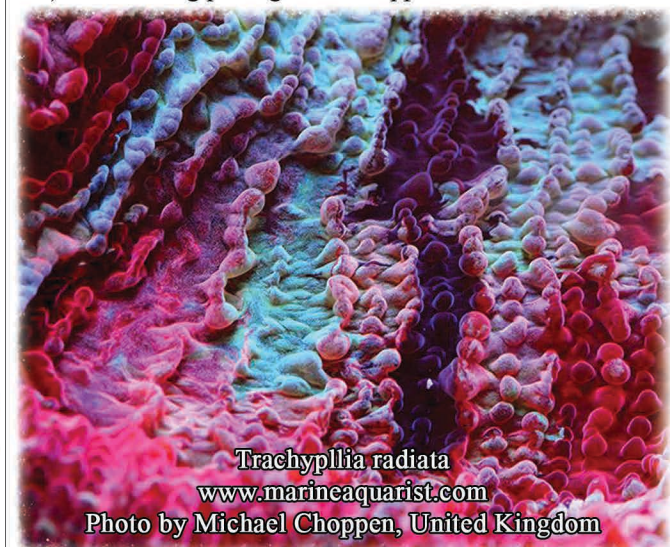
Less weight will produce less saltwater at the desired specific gravity. **Less is less.**

3 Contents should be dry. At the time of purchase, a sealed package of marine salts should be a dry and free flowing mixture of contents. Damp, caked or rock hard packages should be avoided.

4 Contents should be made up of uniformly sized particles. When the package of salts is

opened, the contents should appear to be a white colored mixture with uniform or extremely similar size particles in the blend. Brands of salts that have flakes, grains, pellets, chips, etc. do not maintain homogenous chemistry of their formula throughout the entire package being sold.

Attempting to better mix a new drum, pail or package of improperly manufactured marine salts will not achieve much of anything. For example, a full bucket of salt cannot be mixed by rolling it around on the floor. A poorly mixed salt formula cannot be remedied, because of the disproportionate ingredients used and made at production. Marine salt brands like this should be avoided. Salt formulas should be properly mixed and combined into its uniform final product (ready for use) before being packaged and shipped to end users.



5 Contents must be odor free. Newly opened packages of dry, marine salt should not have an odor. At a maximum, you may notice a faint scent of the ocean. Dry salts that smell like a chemistry experiment should be regarded as suspect or avoided.

6 Salts should mix clean, without residue and without heating up. When marine salts are mixed in clean fresh water, they should mix into a clear solution without leaving any residue and without unwanted hazardous and potentially dangerous temperature changes.

Salts that produce a residue and/or leave a coating in the mixing vessel (white, brown, gray or black undissolved material) suggest they are manufactured with low purity, low grade and low cost ingredients.

Traditionally, these lower quality marine salts introduce unwanted impurities into the new saltwater solution and ultimately into the aquarium. As a result, unwanted algae (diatoms) and/or undesirable hair algae fomentation can grow in the aquarium. Performing frequent water changes with the same salt, in hopes of alleviating the situation, will only worsen the out of control algae problem.

SUFFERING FROM HAIR ALGAE? HAZY WATER? TIRED OF ADJUSTING NEW SALTWATER?

A good marine salt is the first, most essential and lowest cost component for all successful marine fish and reef aquariums.

NOTHING - additives, supplements, filtration, skimmers, lighting, controllers, diet, etc. can remedy bad saltwater.

Nothing impacts the success of the marine aquarium more than the *appropriate* choice of *marine salt*.

Low priced marine salts may *seem* appealing, but may not be most *suitable* for your system.

Common sense and a *discerning eye* go a long way in improving an aquarist's marine fish and reef aquarium keeping.

Undissolved residue and cloudy water observed after the mixing process suggest high impurity levels in the salt. If these impurities or insoluble components are so physically obvious, what *unseen* contaminants could possibly be introduced into the solution, as well? Salts that produce a cloudy or hazy solution when mixed side-by-side with a proper brand suggest they are manufactured with less than optimal ingredients.

Salts that heat up (exothermic reaction) when mixed strongly suggest a reaction of alkaline and acidic chemicals. These marine salts generally produce a hazy solution and a whitish residue that can only be removed by heavy filtration prior to use in the aquarium. Exercise caution with these salts because this unwanted heat can seriously burn your hands.

Why endure scum and residue? These salts waste your time, forcing customers to skim surface scum, clean out mixing containers and/or require skin protection. Alternatively, consumers can choose to use a more suitable brand of marine salts.

7 Salts should measure up when mixed and not require supplementation before use. Marine salts that must be supplemented with additional purchases of Ca, Mg, Alk, etc. prior to use are likely to have improper initial chemical composition. Their inability to balance and yield basic water requirements prove them to be poor marine salt

choices. These brands are labor intensive for the aquarist and are ultimately more costly than purchasing a brand of marine salts that meet all your chemical needs to begin with.

Price vs. Cost: **Price is what we pay.**

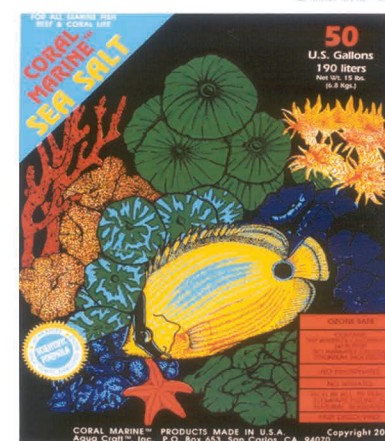
Cost is what is what we pay at the end of the day.

Consider the ramifications of using a marine salt that leaves a residue, must be supplemented, etc. vs. a brand that produces a visibly clear, clean, stable solution. E.g. What is the value of a new product that must be remedied or fixed prior to use? If undissolved salts, residue, hazy water is evidenced, what other unseen undesirable impurities could be introduced into the aquarium?

Marine salts that test with varying levels of Ca, Mg, Alk, etc. from package to package indicate inconsistencies as a result of poor manufacturing. Salt solutions that periodically test positive for traces of toxic ammonia are also unacceptable.

Marine salts that do *not* meet these *standards* are recommended for *return* at the place of purchase for a *refund* or credit. Do not accept replacement with the same or lesser quality brand of marine salts. **Do not settle for less.** Purchasing the optimal salt formula that meets all your needs is a fundamental step in designing a healthy aquarium. The right decision here will save you plenty of time, headache, & money.

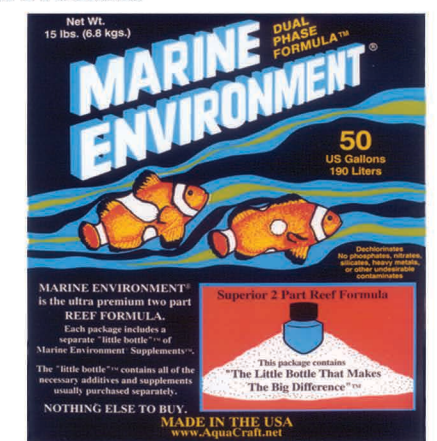
Three Proper Marine Salts from Aqua Craft Products®



Coral Marine® Sea Salt is more than a fish only formula. Available in 150 gal & 8,000 gal sizes.



BIO-SEA® Marinemix the world standard for natural seawater. Available in 25 gal, 50 gal, 150 gal & 8,000 gal sizes.



Marine Environment® *dual phase formula* is the world's first and only reef formula™. Available in 25 gal, 50 gal, 150 gal & 8,000 gal sizes.

Each is the proper weight and mixes fast, clean, & without residue into an optically clear saltwater solution.

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