

WOULD YOU LIKE “GLASS OR ACRYLIC?”

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We are very use to the question “paper or plastic” when shopping in our local super market. But what about the question glass or acrylic? Which is best for you? I have had this discussion with a number of Reef Tectonics clients, as well as fellow hobbyists, over the years and I usually come down on the side of glass. However, there are times when acrylic is the better choice. Let’s look at the characteristics of both and you can make your own decision based on this information.

One of the biggest acrylic upsides is the weight – this is especially important when dealing with a large aquarium. A large glass tank can be as much as 8 x heavier than an acrylic tank of similar volume. The lighter acrylic tank will not only be easier to relocate, it will cause less structural stress on a stand or supporting floor. (Do remember that water and décor make up the majority of the weight of any reef aquarium.)

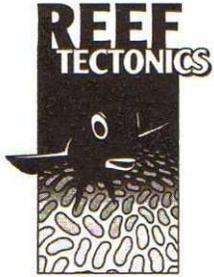
When purchasing a large or custom tank, acrylic is often less expensive than glass. Because it is lighter, an acrylic tank is also less expensive to ship. Acrylic can be molded into more interesting shapes (e.g., round corners and edges) and is easier to drill, which is handy if you need to do some custom plumbing. It is also more difficult to break than glass and has more flex and is thus less likely to fracture in the event of an earth quake (if you happen to live in New Zealand or California, this is an important consideration). Acrylic aquarium seams are also less likely to leak than those of glass tanks.

Acrylic is often clearer than glass (glass has a green hue) and is less refractive. This means you are more likely to see the animal the way it really is! The thicker the glass the worse the refraction and since thicker glass is required for larger tanks this is a more significant issue with more voluminous aquariums. While acrylic may be clearer than normal glass, as it ages it can have a tendency to yellow. Another thing I should mention is that there is now a low-iron glass (e.g., Starphire) that exhibits much less refraction than acrylic and that is very clear. However, it is quite expensive.

The biggest acrylic downside is scratching. A piece of crushed coral or sand that has been accidentally picked up on an aquarium cleaning pad can wreak havoc with an acrylic surface. Because of this propensity, you will have to be very meticulous when cleaning the inside of the aquarium. You should always use scrappers and algae cleaning pads that are specifically designed for cleaning acrylic. Never use a razor blade and I would avoid cleaning magnets (some people take a strong magnet and place an acrylic cleaning pad between the glass and the magnet to reduce the likelihood of scratching). You should be very careful when placing your live rock/décor into your reef aquarium. If you bump the acrylic with a rock or piece of coral, or if the reef should collapse onto an acrylic pane, scratching or gouges are inevitable. I have also seen puffer and porcupinefish bite at the acrylic and scratch it with their teeth! Some argue that while acrylic scratches easier than glass, these can be buffed out. If glass does scratch (and it certainly can), it is impossible to fix without replacing the entire pane of glass.

Crazing is another acrylic “con.” This is where fine lines develop in the acrylic. This can greatly alter the appearance of the tank. There are two reasons that crazing typically occurs in the center of an aquarium pane. The first possible problem is that the acrylic is not thick enough. If the front of a larger aquarium has a significant bow, and crazing occurs, the acrylic is not thick enough. If this occurs, and there is no bowing, it is usually a case of someone using an ammonia based cleaner on the tank. **Never use Windex or any cleaner on the tank that is not made for cleaning acrylic. If you do, it will craze.** You should always use products that are specifically created for cleaning acrylic (e.g., Novus Plastic Polish).

It may be a positive or negative, depending on your situation, but acrylic is a better insulator than glass. If heat is a potential problem with your reef tank, it is likely to be slightly worse because acrylic will hold the heat better than glass.



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