

# Stop Painting And Start Saving With Glass-Fused-To-Steel

A premium tank coating technology that does not deteriorate and never needs repainting continues to “raise the bar” in municipal and industrial liquid storage application standards, says Chris Price, Vice President of Engineering Services at Engineered Storage Products Systems (ESPC) in DeKalb, Illinois, manufacturer of Aquastore® glass-fused-to-steel storage tanks.

At ESPC, Price is responsible for making the best storage option even better.

“In fact, we have just installed the first ever 1,100V testing process in DeKalb to make sure there are absolutely no defects in the steel sheets that make up our Aquastore tanks before they leave the plant,” Price says. “It’s part of many advancements and process improvements over time that prove that glass-fused-to-steel technology is the undisputed leader in tank technology.”

The concept of glass-fused-to-steel technology isn’t new – it goes back 60 years at ESPC. Decades old glass-fused-to-steel tanks look much the same as the day they were installed, Price says. Their ability to endure a long life cycle continues to save municipalities and industry millions of dollars in maintenance and repair costs, particularly fighting corrosion and the need to repaint.

“We don’t even have an expiration date for glass-fused-to-steel yet,” Price says. “They’re the Rock of Gibraltar of storage tanks.”

## No Repainting a No Brainer

Repainting is costly – especially when one considers the need to shut down a tank for extended periods, Price says, every 10 to 15 years. Field repainting field welded or epoxy coated tanks is difficult to do, he adds, with any consistent level of quality. This means shorter periods between repainting, versus none of these costs with glass-fused-to-steel.

Aquastores are a big improvement over tanks with organic coatings and field applied paints, Price claims -- they will slowly begin to deteriorate after installation and eventually require repainting to remain in service.

## Fusing is The Key to Longevity

The core of the glass-to-steel concept is in the fusing process – ESPC molecularly joins steel with glass at 1,500 degrees F in a controlled process furnace. The process chemically alters the two materials resulting in long-term durability, greater bond strength and long service life, a method far superior to “baking” steel and epoxy paints in order to get them to stick together.

“There is a big difference between high temperature fusing in a high-tech furnace for a single, strong and integrated material and mechanically bonding a generic powder coating by spraying it on and melting it at 400 degrees F,” Price says. “There is no molecular linking or fusing involved between the steel and coating or paint.”

## Thicker Coating is Better Coating

ESPC’s proprietary Vitrium Technology™ combines glass that has been enhanced with titanium with a highly engineered, ultra-fine glass bubble structure, Price explains.

“Internal coatings of an Aquastore average

16mm in thickness,” says Price. “This compares to most epoxy coatings which are 7 to 11 mm thick on the interior, and only 6 to 10mm on the exterior. Thicker coatings are obviously better for durability.”

Another proprietary technology ESPC has developed is Edgecoat™, which thermally applies a stainless steel alloy to mechanically rounded sheet edges.

## Fused Glass Fights Corrosion

Titanium-enhanced glass-fused-to-steel has the characteristics that make it impermeable to liquids and vapors, eliminates corrosion undercutting and offers excellent impact and abrasion resistance, Price continues, so there is no fading or chalking.

For quality control and cost efficiency, ESPC designs and engineers all Aquastore tanks in-house. Construction is exclusively performed by Authorized Aquastore dealers. “We don’t use outside contractors for design, engineering or construction because they generally don’t adhere to our standards of excellence,” Price adds.

Authorized Aquastore dealers offer turnkey specification, construction and service, Price adds, for the life of the tank.

“We don’t walk away,” Price stresses. “Plus, few in the business have more experience in municipal and industrial tank engineering, specifications and service. And no one has the experience with glass-fused-to-steel technology that ESPC and its authorized dealers do.”



**Let's Be  
PERFECTLY  
CLEAR...**

...There simply is no better tank coating than glass-fused-to-steel.



### Glass-Fused-to-Steel (Porcelain Enamel) is:

- A single, strong, integrated porcelain enamel and steel material Fused together at over 1500° F
- An inert, inorganic coating that NEVER needs painting

### Glass-Fused-to-Steel is not:

- A coating that needs periodic repainting to remain in operation
- An organic coating that begins to deteriorate starting day one after installation

Glass-fused-to-steel tanks have been proven in the field for over 60 years. The technology is so robust that a service expiration date is yet to be determined. **Don't be Fooled by claims that paint and other paint-like coatings are better than glass.**

**If it's NOT fading,  
If it's NOT chalking,  
Then it's not paint....it's Glass !!**

Specify quality, experience and low maintenance. Specify Aquastore® glass-fused-to-steel tanks. **The choice is clear.**

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