

Laars glass lining with Microban® is a premium glass lining for hot water applications (temperatures up to 180°F) that features antimicrobial protection. Thanks to our special formula, the glass lining with Microban® offers many advantages: Exceeds all testing target points as outlined by ASHRAE specifications; Produces a superior, resistant, long-lasting coating which bonds to the steel substrate; Helps prevent the growth of bacteria, mold and mildew on the surface of the tank lining; Expands and contracts with steel due to its unique bubble structure. Glass lining allows for a 5-year tank warranty.

# LAARS Glass Lining for Custom Steel Tanks

## Submittal Data

### Process:

Our multi-step process ensures 100% coverage and proper bonding. Each vessel is cleaned and sandblasted for surface roughness. An automatic articulating sprayer then applies a consistent 20 mils of wet glass enamel to the inside of the tank. The partial vessel is then dried in a curing oven at 400°F until all moisture is removed and the dried enamel is semi-bonded to the vessel wall. Vessels are then fired at 1600°F (the melting point of the enamel with Microban®) and “soaked” at that temperature for a period of time to further bond the lining to the steel substrate. Finally, the vessel is moved to the cooling tower before final assembly.

### Testing:

Laars glass lining with Microban® is tested under the following ASTM testing guidelines:

- W-H-196 Test = 7.0 – 8.0 mg/in<sup>2</sup>: This test consists of exposing the enamel to a boiling (212°F) 4/10% solution of sodium bicarbonate for (8) eight (18) eighteen-hour cycles. Maximum weight loss after eight cycles is not to exceed 15 mg/in<sup>2</sup>.
- PEI T-21 Spot Acid Test = Class A: This test is used to determine enamel resistance to acids. The test area is examined for visible effects on the enamel and is graded from Class AA (no sign of etching) to Class D (etched surface).
- Impact resistance = Class 4 to 5: The impact resistance test is used to determine the adhesive qualities of enamel to the substrate. The enamel is graded from Class 1 (worst) to Class 5 (best), fractured glass adhering solidly to the impact area. Class 3 is acceptable.
- Hi-Pot Test = Less than 20: The HYPO test is a measurement of the continuity of the enamel coating (spark test). Fifty (50) sparks or fewer are the acceptable count for the water storage industry.
- Thickness: 10 mils +/- 2 mils
- Adhesion: Class 4 to 5
- Resistance: Class A
- Tank Sizes: 24” diameter to 84” diameter, up to 262” long
- Maximum Temperature: 180°F
- Color: Cobalt Blue
- Anodes: One or more magnesium anode rods based on gallon size.

Microban® antimicrobial product protection helps prevent the growth of bacteria, mold and mildew that may affect the product. The built-in antimicrobial properties do not protect users or others from disease-causing organisms. Microban® is a registered trademark of Microban Products Company.

