



Ultonium Double Glass Lining Specification – DGL

Double glass lining specification for hot water applications.

Niles Steel Tank offers its premium Ultonium glass lining for hot water applications with a with temperatures up to 180 degrees.

Each vessel is sandblasted to white metal and inspected for surface roughness prior to the glassing application. An automatic spray applicator is inserted into the tank where the Ultonium glass is applied at high pressure with overlapping spray heads for uniform coverage with a 10 to 12 mil thickness. The tank is then dried at 400 degrees and moved into the furnace where it is fired at 1500 degrees where the glass liquefies and bonds to the steel substrate. After cooling, a second 10- to 12 mil layer of Ultonium is applied and the tank is re-fired. The tanks with a resulting glass thickness of approximately 24 mils comes with a 10 year warranty.

Niles Ultonium is tested under the following ASTM testing guidelines:

W-H-196 Test = 7.0 – 8.0 mg/in²

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/in².

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:	20 mils +/- 2 mils
Adhesion:	Class 4 to 5
Resistance:	Class A
Tank Sizes:	24" diameter to 84" diameter, up to 262" in length
Maximum Temperature:	180°F
Color:	Cobalt Blue
Anodes:	One or more magnesium anode rods based on gallon size