

Highland HighGuard

HighGuard Underground Steel Storage Tanks

HighGuard is the latest innovation from the nation's leading producer of underground steel storage tanks — Highland Tank.

Highland's HighGuard tank combines the structural strength of steel tank construction and the lasting protection of a polyurethane coating to produce a high-quality storage tank second to none!

The HighGuard protective coating is a solvent-free, tar-free, two component polyurethane coating system that will provide permanent and effective corrosion protection for the effective life of the tank. The very short reaction time of the HighGuard coating allows it to be spray applied with special plural component equipment that ensures an even application over the entire surface of the tank.

HighGuard's 75 mil coating is extremely resistant to surface damage due to impact or abrasion that may occur during transportation and installation. All HighGuard tanks are commercially grit-blasted with steel grit to thoroughly clean and prepare the exterior surfaces for coating. This process leaves the tank with a rough-to-the-touch feel, dry and free from any dust, oil and grease. This surface preparation provides for superior adhesion that minimizes the effects of hot and cold temperatures.

HighGuard tanks outperform fiberglass reinforced polyester (FRP) coated tanks in every respect and require no artificial reinforcement. When the coating is cured, HighGuard's surface is completely smooth and seamless having a glass-like appearance.

Superior Performance

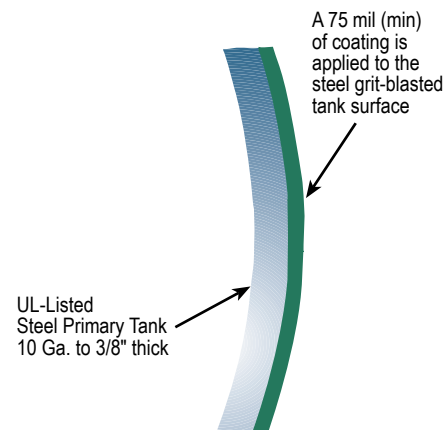
Highland's HighGuard technology meets or surpasses all current UL standards. The HighGuard tank is superior in strength and rugged in appearance. HighGuard's do not require monitoring or cathodic protection with anodes.

Cost Effective

Highland's HighGuard tanks are the most economical choice for protected steel tank storage. On a total installed-cost basis, HighGuard tanks cost less than any other unmonitored tank configuration on the market today. Improved performance and safety without the high cost!

Environmentally Friendly


Unlike polyester/fiberglass composite tanks which utilize amines, styrenes and other hazardous materials in production, the HighGuard coating resin uses none of these materials and is environmentally friendly.



This polyurethane coating is not an environmentally regulated material. It can be disposed of as non-hazardous material, thus complementing Highland Tank and our customers' environmental programs.

Long Term Quality

Highland's HighGuard tanks are manufactured and coated under strict quality control procedures and must pass a 15,000 volt spark test before shipment. All tanks carry a 10-year limited warranty.

 Highland Tank



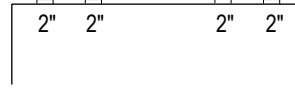
Highland Tank[®]

Why HighGuard?

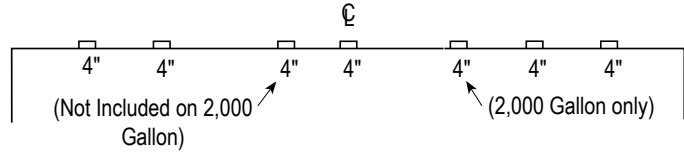
- Superior Product - Lower Cost
- Provides 75 mils Polyurethane Protection
- Environmentally Friendly
- Product Compatible Steel Construction
- No Cathodic Monitoring Required
- UL-58 Listed Construction
- UL-1746 Parts II and IV Approved Coating
- 10-Year Limited Warranty

Standard Tank Fittings

240-1,500
gallon tanks

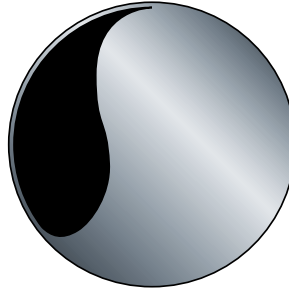


1,501 - 50,000
gallon capacities



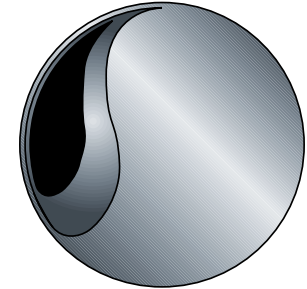
Nominal Tank Capacity Gallons	Nominal Tank Dimensions	
	Diameter	Length
240	3'2"	4'0"
300	3'2"	5'0"
500	4'0"	5'5"
1,000	4'0"	10'9"
1,000	5'4"	6'0"
1,500	5'4"	9'0"
2,000	5'4"	12'0"
2,500	5'4"	15'0"
3,000	5'4"	18'0"
4,000	5'4"	24'0"
4,000	6'0"	19'0"
4,000	8'0"	10'8"
5,000	6'0"	23'10"
5,000	8'0"	13'4"
6,000	6'0"	28'8"
6,000	8'0"	16'0"
8,000	10'0"	14'0"
8,000	8'0"	21'4"
10,000	10'0"	17'0"
10,000	8'0"	26'8"
12,000	10'0"	20'6"
12,000	8'0"	32'0"
15,000	10'0"	25'6"
15,000	8'0"	40'0"
20,000	10'0"	34'0"
20,000	10'6"	31'0"
25,000	10'6"	38'9"
30,000	10'6"	46'6"
40,000	12'0"	47'6"
50,000	12'0"	59'6"

Tank shell thickness is calculated using the Roark equation as defined by Underwriters' Laboratories UL-58



Single-wall

Single-wall tanks are constructed from a single sheet of stainless or mild carbon steel in thicknesses of 10 gauge to $\frac{3}{8}$ ". Standard features include lap joints ($\frac{1}{2}$ " min.), continuous exterior fillet welds on all joints and flat-flanged heads. All tank's are air tested at 5 psi and seams are inspected.



Double-wall Type I & II

Double-wall tanks are fabricated using the same construction techniques as single wall tanks. The primary steel vessel, is completely wrapped with a secondary steel wall. The area between vessel walls (the interstice) can be monitored for leak detection.



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