# 40000CYLFG136

CYLINDRICAL FIREGUARD

Recommended Guide Specification

General

Provide and install a 40000 gallon Highland Tank UL-2085 Fireguard® Thermally Insulated, FG Double-Wall Steel Aboveground Storage Tank. Tank storage volume shall be 40000 gallons. Tank shall be 11’ 6” in diameter x 51’ 6” long (inside).

The tank shall be designed for aboveground storage of flammable and combustible liquids at atmospheric pressure. Tank shall include integral steel secondary containment and thermal insulation that provides a minimum two-hour fire rating.

Each tank shall be delivered as a complete UL-listed assembly with two factory supplied, welded-on saddles. Size and location of saddles shall be as required by Highland Tank. Saddles to be set level on a solid foundation.

Tank shall be designed for possible relocation at a future date. Concrete encased tank designs are not equal and will NOT be permitted.

Tank shall comply with the latest edition of National Fire Protection Association NFPA 30 Flammable and Combustible Liquids Code. The tank’s secondary containment must be tested for tightness in the factory and in the field before commissioning. Tank shall be supplied with emergency vents for the primary and the secondary containment tanks. Emergency venting by "form of construction" is not equal and will NOT be permitted.

Inner and Outer Tank shall be manufactured in accordance with UL-142 Standard for Steel Aboveground Tanks for Flammable and Combustible Liquids. Entire tank shall be labeled for Underwriters Laboratories UL 2085 Standard for Insulated Secondary Containment Aboveground Tank for Flammable Liquids. The tank design shall comply with UL 2085 "Protected" Tank standard and shall be tested for Ballistics, Impact, Hose Stream, and Pool Fire UL-2085 performance standards.

Tank shall be manufactured and labeled in strict accordance with Steel Tank Institute (STI) Fireguard® Thermally Insulated, Double Wall Steel Aboveground Storage Tank standards as applied by a licensee of the STI. Tank shall be subject to the STI’s Quality Assurance program and shall be backed by the STI 30 year limited warranty.

The tank system shall also meet or exceed the requirements of:

• National Fire Protection Association NFPA 30A Automobile And Marine Service

Station Code.

• 1997 Uniform Fire Code (UFC) "Protected" AST criteria as per Appendix II-F,

including ballistics protection.

• California Air Resources Board (CARB) testing requirements for air emissions.

• Southern Building Code Congress International (SBCCI) Standard Fire Prevention Code.

• 1993 Building Officials and Code Administrators (BOCA) National Fire Prevention Code.

Construction

Tank shall be fabricated per UL-142 of mild carbon steel with shell seams of continuous lap weld construction.

Tank shall be of double wall construction and provide complete secondary containment of the primary storage tank’s contents by an impervious steel outer wall.

A minimum of 3" of porous, lightweight monolithic thermal insulation material shall be installed at the factory within the interstitial space between the inner and outer wall. Thermal insulating material:

• shall be in accordance with American Society of Testing Materials (ASTM) Standards C-332 and C-495.

• shall allow liquid to migrate through it to the monitoring point.

• shall not be exposed to weathering and shall be protected by the steel secondary

containment outer wall (an exterior concrete wall or vault exposed to the elements will NOT be permitted).

Lifting lugs shall be provided at balancing points to facilitate handling and installation.

Exterior Protective Coating:

• Surface Preparation: Grit blast - SSPC-SP-6 White Blast.

• Finish: White finish paint system 5-7 DFT on the shell and heads.

Threaded fittings with thread protectors shall be supplied as follows (all fittings must be located on tank top per UL):

• One (1) 2" - Interstitial Monitoring.

• One (1) 2" - Normal Vent, Primary Tank.

• One (1) 4", 6", or 8" - Emergency Vent, Primary Tank.

• One (1) 4", 6", or 8" - Emergency Vent, Secondary Tank.

• One (1) 4" or 6" - Product Fill.

• One (1) 2" or 4" - Product Pump or Supply.

• One (1) 4" - Product Return or Auxiliary (3,000 gal. and larger).

• One (1) 2" or 4" - Liquid Level Gauge.

• One (1) 4" - Stage 1 Vapor Recovery, Electronic Level Stage 1 Gauge, or Auxiliary

(4,000 gal. 8’0" diameter and larger)..

• One (1) 18" Manway (min.) with emergency vent (4,000 gallons and larger).

• Additional fittings available upon request.

Optional Equipment

• Bulkhead(s) for Split Tank.

• Manway(s) \_\_\_\_".

• 7 or 10 gal. Spill/Overfill Container.

• Pump Mount(s) for Top Mount, Side Mount, or for Free Standing Pumps and Dispensers on Standard or Split Tanks.

• "Spill-mate" for remote fill.

• External Ladder.

• External Ladder Platform.

• Walkway(s) with Handrails.

• Stairs and Platforms with Handrails.

• Internal Ladder(s).

• Internal Coating with Interior Weld (500 gal. minimum).

• Monitoring Systems.

• Fuel Management System.

• Electronic Overfill Detection Sensors and Alarm Panels.

• Equipment Packages:

- Standard Gasoline Package

- Standard Diesel Package

- Emergency Generator Package

- Waste Oil Package

- Consult Factory for Aviation Fuel (Avgas, Jet-A, or Jet A-1) Packages

Execution

Tank shall be installed on a reinforced concrete base constructed by the owner. Installation and testing shall be in strict accordance with Steel Tank Institute Installation and Testing Instructions for Thermally Insulated, Lightweight, Double Wall Fireguard® Aboveground Storage Tanks.

Approved Manufacturer: Tank shall be manufactured by Highland Tank; Stoystown, PA; Manheim, PA; Lebanon, PA; Watervliet, NY; Greensboro, NC.