

Fireguard[®] LIMITED WARRANTY
Limitations of Liability and Disclaimer

What is Covered by this Warranty

Provided that the conditions set forth below are satisfied, the steel tank manufacturer identified with the tank (hereinafter referred to as "Warrantor") warrants the **Fireguard[®]** tank for 30 years following delivery of the tank to the tank owner at the time of the original installation ("the Owner"), against any of the following events which may occur, provided the event occurs under operating conditions covered by this Warranty: (i) against release of stored product from any secondary containment tank; (ii) against failure of the primary tank caused by non-corrosion related cracking, breakup or collapse; and (iii) perforation of the primary tank caused by internal corrosion as long as the product stored within the tank is compatible with steel. In addition, the Warrantor warrants the tank against failure due to defective materials and workmanship for up to 1 year following the delivery of the tank to the Owner.

Conditions to Warranty Effectiveness

The limited warranties set forth herein are subject to the following conditions:

1. The **Fireguard[®]** tank must be: (i) The Original Aboveground Installation within the Continental United States of America, Alaska, Hawaii, and the Commonwealth of Puerto Rico or Canada; (ii) the tank was fabricated by the Warrantor so as to meet the **Fireguard[®]** Specifications; and (iii) the tank was installed and maintained in accordance with the applicable **Fireguard[®]** specifications and the applicable **Fireguard[®]** Installation Instructions that were in effect on the date of shipment by the Warrantor, any subsequent maintenance procedures of which the Owner has written notice, and any applicable governmental codes and regulations. Refer to the Installation Instructions on the back of this document for technical requirements concerning relocation of this tank by the original owner, in order to retain warranty eligibility. Tanks remaining in their original installation location will retain warranty eligibility if the facility where the tank is installed is sold to a new owner.
2. This Limited Warranty is not valid unless, and until, the Warranty Validation Card is fully completed by the Owner and returned to Steel Tank Institute (STI) within 30 days after the date of tank installation, or 90 days after the Warrantor's shipment of the tank, whichever comes first.
3. Upon discovery of a suspected tank failure or leak by the Owner, the Owner shall give the Warrantor written notice of the suspected tank failure or leak and permit the Warrantor or its designated representative to inspect the tank site prior to, during and after excavation of the tank. The tank owner bears the responsibility to identify that the cause of the failure is from one of the events within the Conditions covered by the Warranty.
4. Upon the Warrantor's determination that the tank failure or leak is covered by this Limited Warranty, the Warrantor at its sole option shall: (1) repair the tank; or (2) replace it with a tank of approximately the same size, design, quality of material and workmanship specified for the original tank; or (3) refund the purchase price of the original tank. If the Warrantor is unable to repair or replace the tank, it shall refund the original purchase price of the tank.

What is Not Covered by this Warranty

Warrantor does not warrant any piping system or any other attachments connected with the tank. Under no circumstances, shall the Warrantor be liable for (1) the cost of repair or replacement of any piping system or other attachments to the tank; or (2) labor costs or other installation costs for tank repair or replacement; or (3) damage to the tank or other property resulting from the accumulation of water in the tank; or (4) damage caused by other improper operating or maintenance practices; or (5) tank failure due to defective materials and workmanship later than one year following delivery of the tank to the Owner or (6) cost of repair or replacement of internal linings or external coatings. This Warranty does not cover STI Generator Base Tanks.

Limitation of Liability and Exclusion of Other Remedies and Damages

The foregoing remedy of repair, replacement or refund shall constitute the sole and exclusive remedy to the Owner. Under no circumstances, shall the liability of the Warrantor, or its affiliates or subsidiaries, under this warranty, exceed the purchase price of the tank.

IN NO EVENT SHALL THE WARRANTOR, OR ITS AFFILIATES OR SUBSIDIARIES, BE LIABLE FOR CLAIMS OF PERSONAL INJURY OR FOR SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS OR REVENUE, LOSS OF USE OF THE TANK OR ANY ASSOCIATED EQUIPMENT, COST OF CAPITAL, COST OF THE SUBSTITUTE EQUIPMENT, FACILITIES OR SERVICES, DOWNTIME COST, CLAIMS OF CUSTOMERS OF THE OWNER FOR SUCH DAMAGES, OR FOR DAMAGE TO PROPERTY, WHETHER SUCH CLAIM SHALL BE FOR BREACH OF CONTRACT, BREACH OF WARRANTY, NEGLIGENCE OR STRICT LIABILITY, AND WHETHER SUCH CLAIM ARISES OUT OF OR RESULTS FROM THIS LIMITED WARRANTY, OR EXPRESS OR IMPLIED WARRANTIES, OR FROM THE DESIGN, MANUFACTURE, SALE, DELIVERY, RESALE, INSTALLATION, TECHNICAL DIRECTION OF INSTALLATION, INSPECTION, REPAIR, OPERATION OR USE OF THE TANK.

Consumer Notice

The exclusion of indirect or consequential damages and the limitation of implied warranties herein may not be applicable to purchasers who are deemed "consumers" and who reside in states that do not allow the limitation of implied warranties or the exclusion of indirect or consequential damages otherwise applicable to consumers. Moreover, if you are deemed a "consumer", you may have specific legal rights in addition to those set forth in this warranty, which rights vary from state to state.

Disclaimer of Other Warranties

THE FOREGOING LIMITED WARRANTY IS THE ONLY WARRANTY MADE. THERE ARE NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Financial Assurance

Warrantor may have purchased insurance to cover some of its warranty obligations under this Limited Warranty. Such insurance would provide financial assurance for Warrantor's warranty obligations, but would not insure the Owner directly. If the Warrantor has purchased such insurance coverage, the Owner may request that the Warrantor provide a certificate of insurance to evidence Warrantor's purchase of such insurance.

Effective with installations on or after January 1, 2009.

Fireguard® (U.S. Pat. No. 5,695,089)
INSTALLATION, TESTING & MAINTENANCE INSTRUCTIONS

1.0	TANK SITE EVALUATION AND PREPARATION PRIOR TO INSTALLATION	3.2.2.3	Close valves A and B. Open valve C.
1.1	The foundation must be designed to support the tank plus 100% of its contents when full. The foundation design shall also take into account the type of support that is being used and the point load associated with that support. The foundation may be constructed using concrete, asphalt, gravel or other stable material and must include provisions in its design to prevent tank movement. The foundation should include any provisions necessary for seismic design. The foundation design must also include provision for draining surface water away from the tank.	3.2.2.4	Connect the regulated test air supply line to test piping as shown in Figure 2.
1.2	For tank installations without cathodic corrosion protection, the tank should be grounded in accordance with applicable electrical and fire code standards.	3.2.2.5	Slowly open valve A to pressurize the primary tank. Pressure gauge 1 should indicate test air pressure given in Section 3.2.1 above.
1.3	Where the steel tank body is in contact with the earth, use a zinc grounding rod. Do not use a copper grounding rod.	3.2.2.6	Close valve A. Disconnect the regulated test air supply line from the test piping.
1.4	Where the steel tank body is in contact with the earth or foundation, it should be protected from external corrosion. For external corrosion protection using cathodic corrosion protection, consult applicable standards (e.g. National Association of Corrosion Engineers) to provide the tank with appropriate protection from lightning without interfering with the corrosion protection. Steel tanks in contact with the earth should not use copper grounding. Refer to STI R893-89, "Recommended Practice for External Corrosion Protection of Shop Fabricated Aboveground Storage Tank Floors."	3.2.2.7	Monitor test pressure in the primary tank for 1 hour minimum. A steady drop in pressure reading for gauge 1 indicates there may be a leak in the primary tank. Check the fittings, and gauge, then retest. If the problem persists, contact the tank manufacturer.
1.5	Tanks located in areas subject to flooding must be protected against floatation.	3.2.2.8	If no leaks are found, close valve C and slowly open valve B to pressurize the interstitial space between the double walls of the tank.
1.6	Aboveground tanks should not be located above underground utilities or directly beneath overhead power lines.		WARNING: Do not apply air pressure to the interstitial space between the walls of a double wall tank without air pressure in the primary tank. Do not apply air pressure to the interstitial space that is higher than the air pressure in the primary tank. Damage to the tank may result. Pressure gauge 1 will indicate a slight drop in test pressure when valve B is opened, but should hold steady at the lower pressure. If the test pressure drops below the minimum requirements, close valve B, reconnect the air supply line and slowly open valve A to increase the pressure in the primary tank. When the required pressure is indicated on gauge 1 close valve A, disconnect the test air supply line. Open valve B to equalize pressure in the primary tank and the interstitial space. Gauge 1 and gauge 2 should have the same pressure reading.
1.7	The tank shall be protected from vandalism and accidental damage.	3.2.2.9	Close valve B. Hold the test pressure in the interstitial space for 1 hour minimum. A steady drop in pressure gauge 2 indicates there may be a leak in the interstitial space. Check the fittings, the gauges, and then retest. If the problem persists, contact the tank manufacturer.
1.8	The tank shall be installed in accordance with all applicable codes, NFPA 30, NFPA 30A, UFC, etc. as well as local environmental regulations and safety codes. Consult local authorities before installing this tank.	3.2.2.10	Proceed to Section 3.2.3, "Detection of Leaks" below.
2.0	TANK HANDLING	3.2.3	DETECTION OF LEAKS
2.1	Do not handle or install the tank without having knowledge and experience in procedures involved with proper and safe installation of an aboveground tank used for storage of stable, flammable and combustible liquids.	3.2.3.1	Immediately apply the leak test solution to the tank exterior surfaces, welds, fittings, etc. Check for leaks. No leaks are permitted. If leaks are found, notify the tank manufacturer. If no leaks are found, testing of the tank is complete.
2.2	Equipment for handling the tank shall be of adequate size to lift and position the tank. DO NOT DROP OR DRAG THE TANK.	3.2.3.2	Open valve C, then slowly open valve B to release the test air pressure.
2.3	Tanks shall be carefully handled using cables or chains of adequate length (with spreader bars, if necessary) and size. Attach to the tank using the lifting lugs provided. Care should be taken that the angle between the two cables, at the lift point, shall be no greater than 60 degrees.	3.2.3.3	With the tank depressurized, remove the test piping, temporary plugs, caps and seals. Reinstall the emergency relief vents, etc. which were removed in Section 3.2.1 above. Emergency vents are required on both the primary tank and the secondary tank.
2.4	DO NOT HANDLE OR MOVE THE TANK UNLESS IT IS EMPTY.		WARNING: Emergency relief vents must be operable to prevent causing tank failure by over-pressurization.
2.5	This is a stationary tank. Do not use this tank for transport of any product.	4.0	TANK PIPING AND ACCESSORIES
3.0	TESTING	4.1	Install all permanent piping and fittings using compatible, non-hardening thread sealant material.
3.1	GENERAL REQUIREMENTS	4.2	All unused tank openings must be properly sealed and tested to be liquid and vapor tight prior to putting the tank into service.
3.1.1	An on-site air test of the tank may be required by local authorities to ensure no damage has occurred in shipping and handling. All testing shall be performed as described in paragraph 3.2 below.	4.3	DO NOT WELD ON THE TANK, MODIFY OR PENETRATE THE TANK STRUCTURE IN ANY WAY WITHOUT THE EXPRESS WRITTEN PERMISSION OF THE TANK MANUFACTURER.
3.1.2	If the manufacturer has shipped the double wall tank with a vacuum on the space between the walls, read and record the vacuum pressure. If the vacuum gauge reading has dropped more than 2 inches (6.77 kPa) from the level at which it was shipped, contact the tank manufacturer.	4.4	All tank accessories shall be installed as required per local codes. Anti-siphon devices, overflow shut-offs and alarms, vents gauges, emergency vents, etc. are common requirements for tanks storing motor fuels for the purpose of being dispensed into motor vehicles.
3.1.3	In lieu of the air pressure test described in paragraph 3.2 below, a vacuum may be applied to the interstice of a double-wall tank or to the interstice of a double-bottom tank. NOTE: This test procedure may be difficult to conduct for large (greater than 2000 gallons) tanks because of the greater volume of space to be evacuated and difficulty in sealing the tank openings. DO NOT APPLY A VACUUM TO THE PRIMARY TANK OF A DOUBLE-WALL TANK OR TO A SINGLE-WALL TANK. A vacuum of 6 inches Hg (20.3 kPa) is to be applied. The vacuum shall be held without a loss for one hour on tanks less than 20,000 gallons and for 2 hours for tanks greater than or equal to 20,000 gallons. If this vacuum cannot be held for the specified time interval, then perform the air test procedure described in paragraph 3.2 below.	5.0	LABELING
3.1.3.1	Caution must be taken in applying a vacuum to the interstice of a tank and the testing must be stopped if any deformation appears on the tank.	5.1	A label regarding tank maintenance shall be applied near the installation instructions. The label shall state, "KEEP WATER OUT OF YOUR TANK. For tank maintenance instructions, see STI R111 at www.steel tank.com ."
3.2	AIR PRESSURE TEST PROCEDURE FOR TANKS	5.2	Tanks shall be labeled in accordance with all applicable codes.
3.2.1	Remove emergency vents and cap openings to hold tank pressure as required. NOTE: Use only calibrated air pressure gauges with a 0-15 psig (0-103 kPa) dial span. The relief valve must have a flow rate at the set pressure that is greater than the flow rate of the air supply line. The regulated air supply test pressure used for this test should be as follows:	6.0	MAINTENANCE
a.	HORIZONTAL CYLINDRICAL TANKS - Not less than 3 psig (20.7 kPa) nor more than 5 psig (34.5 kPa). Set the pressure relief valve in the air supply line at 5.5 psi (38 kPa).	6.1	The tank operator should perform periodic walk-around inspections to identify and repair areas of damage to the tank or coating. Check for proper drainage around the tank area.
b.	VERTICAL TANKS - Not to be less than 1½ psig (10.4 kPa) nor more than 2½ psig (17 kPa) or that gauge pressure above 1½ psig (10.4 kPa) which first causes visible deformation of the tank. Set the pressure relief valve in the air supply line at 2½ psig (17 kPa).	6.2	It is imperative that the tank exterior be inspected periodically to ensure that the integrity of the coating is maintained. The frequency of periodic repainting will be based upon environmental factors in the geographic area where the tank is located. Special consideration should be given to the selection of the paint, surface preparation and coating application. The coating selected should be suitable for use with the current coating, or the existing coating should be removed. The coating selected should be of industrial quality.
c.	RECTANGULAR TANKS - Not more than 1½ psig (10.4 kPa). Set the pressure relief valve in the air supply line at 1½ psig (10.4 kPa). This 1½ psig (10.4 kPa) pressure is to be used for testing tanks in the field ONLY. In-shop testing will be performed at a different pressure. See the Fireguard® Specification, paragraph 5.0, "Tightness Testing" for more information. CAUTION: Do not leave pressurized tank unattended while the air supply line is connected. Do not stand in front of tank heads or fittings when pressurizing tank. Pressurizing of large tanks may result in the slight deformation of the top and bottom of vertical tanks, of the sides of rectangular tanks, and of the heads and ends of cylindrical tanks. Should deformation appear severe, immediately relieve the pressure.	6.3	Proper site preparation and maintenance are vital to ensure drainage of surface water. Should ground conditions change or settlement occur, take the appropriate steps to maintain proper drainage and prevent standing water near or under the tank area.
3.2.2	TANK PRESSURIZING PROCEDURE	6.4	The primary tank shall be inspected monthly for the presence of water at the lowest possible points inside the primary tank. Remove any water found. Water and sediment in fuel can cause plugging of filters. Also, bacterial growth, originating from the fuel can cause corrosion of tanks and lines. For procedures on how to check for the presence of water and removal of water, refer to STI R111, Storage Tank Maintenance. For copies of the RP and more information, please go to www.steel tank.com .
3.2.2.1	The following air pressure testing does not apply to double-wall tanks equipped with interstitial vacuum monitoring systems. (In lieu of the air pressure test, the tank may be shipped from the factory with a vacuum in the tank interstice. Read and record the vacuum pressure. If the vacuum pressure gauge reading is less than 12 inches Hg (40.5 kPa), contact the tank manufacturer).	6.5	This tank must be removed from service if damaged by fire exposure, other physical means or misuse.
3.2.2.2	Install test piping as shown in Figure 2. Temporarily plug, cap or seal off remaining tank openings to hold pressure.	6.6	Failure to adhere to these maintenance instructions may void your warranty.
		6.7	Tank relocation requirements. Aboveground storage tanks are often relocated. The following instructions are to be followed when this occurs. All steps are to be documented and the documentation is to be kept for the life of the tank.
		6.7.1	The hazards associated with the cleaning, entry, inspection, testing, maintenance or other aspects of ASTs are significant. Safety considerations and controls should be established prior to undertaking physical activities associated with ASTs. Cleaning of tanks must be per state and local jurisdiction requirements.
		6.7.2	Refer to STI Standard SP001, "Standard for the Inspection of Aboveground Storage Tanks" for requirements concerning tank inspections. This SP001 Standard details requirements for inspections based on the tank installation and age. A tank must undergo the appropriate inspection prior to relocation.
		6.7.3	The tank must be subjected to a pressure or vacuum test as detailed paragraph 3.2 above. Except an inert gas, such as nitrogen, should be used for tanks that have previously held fuel.
			Disclaimer
			These instructions are intended only as an aid to tank installers who are knowledgeable and experienced in aboveground tank installation. Compliance herewith does not necessarily meet the requirements of applicable federal, state and local laws, regulations and ordinances concerning tank installation. STI makes no warranties, express or implied, including but not limited to, any implied warranties of merchantability or fitness for a particular purpose, as a result of these installation instructions.

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This information furnished as a service of a Steel Tank Institute member.