

STANWADE METAL PRODUCTS

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PREFACE

The Standard for Fire-Resistant Aboveground Tanks with Integral Secondary Containment, Flameshield, is based on the application of sound engineering principles and the combined experience of STI membership, which includes state-of-the-art manufacturing considerations. It represents a composite input from users, manufacturers, regulatory authorities and consultants.

The Flameshield double wall aboveground steel storage tank has many advantages. It is manufactured with a tight wrap double wall design, providing built-in secondary containment and interstitial monitoring capability. Flameshield meets NFPA 30A requirements for fire resistance. In the space required for a single wall aboveground tank, the Flameshield delivers an economical and safe means of storage, compatible with a wide range of fuels and chemicals.

Emergency venting and overfill prevention capability is designed into the product. Flameshield tanks are listed by Southwest Research Institute.

1. PRODUCT NAME

Flameshield, double wall Fire-Resistant Steel Aboveground Storage Tank

2. MANUFACTURER

Stanwade Metal Products
6868 State Route 305
Hartford, Ohio 44424
(800)826-5243

3. PRODUCT DESCRIPTION

The Flameshield provides horizontal and vertical steel tank designs for fire resistant double-wall storage of liquids aboveground, without using more space than an ordinary single-wall tank. Flameshield double wall steel aboveground storage tanks are manufactured in accordance with Steel Tank Institute Publication No. F921®, Standard for Aboveground Tanks with Integral Secondary Containment, Appendix D. These tanks are also listed by Southwest Research Institute.

The Flameshield design enables:

- Reduced separation distances in accordance with NFPA 30A requirements for fire resistant tanks

- Leak detection through interstitial monitoring.
- Integral secondary containment, a tightly wrapped layer of steel, supplies extra environmental protection without the cost or weight of concrete.
- Concrete or earthen diking is not required for most Flameshield tanks since integral secondary containment is part of the double wall design.
- Economical to install or move, the light weight of the entire tank unit eases relocation efforts on projects that demand a portable alternative or where underground tanks are not feasible.
- Flameshield aboveground tanks are compatible with a wide range of fuels and chemicals.
- Tank capacities can be specified for up to 30,000 gallons in horizontal designs or up to 30,000 gallons in vertical. Smaller capacities typically provide greater portability.
- Horizontal tanks can be designed with skid or saddle-mounted supports. All supports are in accordance with UL 142 as well. The supports provide a maximum height of 12 inches from grade through a pre-engineered design to brace the tank and its contents.

4. TECHNICAL DATA

Flameshield meets the requirements of:

- Steel Tank Institute F-921®, Standard for Aboveground Tanks With Integral Secondary Containment, Appendix D
- Southwest Research Institute Standard SwRI 97-04
- Underwriters Laboratories UL 142 Standard for Steel Aboveground Tanks for Flammable and Combustible Liquids (for inner tank and secondary containment)
- National Fire Protection Association NFPA 30 Code, 1996 Edition
- 1996 Southern Building Code Congress International (SBCCI) Standard for Fire Prevention Code
- 1999 Building Officials and Code Administrators (BOCA) National Fire Prevention Code

5. INSTALLATION

Illustrated installation and testing instructions for double wall aboveground tanks (Document No. R932) are available upon request from Stanwade Metal Products. Tank installation is a specialized craft. It is important to assure that installers have the necessary knowledge, skills and equipment to enable proper and safe aboveground storage tank installation.

6. AVAILABILITY

Flameshield steel double wall aboveground storage tanks are available from Stanwade Metal Products.

Information on tank costs can be obtained directly from a Stanwade Metal Products distributor. Installation costs should be requested from qualified and experienced tank installation contractors.

7. WARRANTY

Information on double-wall aboveground storage tank warranties can be obtained directly from Stanwade Metal Products and its distributors.

8. MAINTENANCE

Aboveground tanks are subject to basic maintenance requirements during the service life. A tank operator should perform periodic walk-around inspections to identify areas of damage to the vessel or coating. Periodic repainting of the tank's external surface will be required. The frequency of this maintenance procedure will be based upon environmental factors in close proximity to the tank.

Periodic maintenance should also include testing for, and removal of, water that may accumulate in the tank.

9. TECHNICAL SERVICES

Engineering and installation assistance can be provided by qualified Stanwade Metal Products distributors.