



State of Illinois
Office of the State Fire Marshal

Checklist for Documenting UST Compatibility

SUBMIT THIS FORM WITH SUPPORTING DOCUMENTATION ATTACHED.

ALL COMPONENTS MUST BE LISTED IN DETAIL, & COMPATIBILITY DOCUMENTATION MUST CLEARLY IDENTIFY THE COMPONENTS.

Facility where equipment is located:

Facility Number: New Site
Facility Owner: Caseys Retail Marketing
Facility Name: Caseys General Store
Street Address: 1725 PJ Keller Highway
City: Lexington
County: McLean

UST Information:

Tank ID Number: 5
Tank Material: Steel _____
FRP X
Single Wall _____ Double Wall X
Tank Volume: 8,000 gal
Tank Product: E-85

Complete the checklist below, listing compatibility determination, method used and description. **All answers must be "YES" and supported with a sufficient description or supporting documentation** in order for your UST system to demonstrate compatibility with the blended fuel/biofuel product.

UST SYSTEM COMPONENTS	DOCUMENTATION DEMONSTRATING COMPATIBILITY WITH SUBSTANCE LISTED ABOVE		METHOD A or B (MAY USE BOTH)	DESCRIPTION OF COMPONENT TYPE, MODEL NUMBER, & NATIONAL LABORATORY CERTIFICATION, LISTING OR MANUFACTURER APPROVAL (ATTACH TO CHECKLIST)
TANK	NO	☒ YES	B	Xerxes Double Wall
PIPING (incl. shear valves, flex connectors)	NO	☒ YES	A	APT 1.75 XP double wall flex EBW shear valves Flexing stainless steel UL 971
CONTAINMENT SUMPS	NO	☒ YES	A	APT poly dispenser LMN-3617 APT FRP - STP sumps TMA 4836 UL 2447
PUMPS (STPs/Suction; Dispensers, hoses, nozzles)	NO	☒ YES	A	FE Petro 2HP Gilbarco NF8 dispensers Husky hoses, nozzels, swivels, breakaways UL/ULC 79A approved

UST SYSTEM COMPONENTS	DOCUMENTATION DEMONSTRATING COMPATIBILITY WITH SUBSTANCE LISTED ABOVE		METHOD A or B (MAY USE BOTH)	DESCRIPTION OF COMPONENT TYPE, MODEL NUMBER, & NATIONAL LABORATORY CERTIFICATION, LISTING OR MANUFACTURER APPROVAL (ATTACH TO CHECKLIST)
RELEASE DETECTION EQUIPMENT	NO	☒	B	TLS 450 DPLLD stainless steel Veeder-Root 794380-323 Veeder-Root 794380-345 Veeder-Root 846391-4xx
SPILL PREVENTION EQUIPMENT	NO	☒	A	EBW 5gal defender spill bucket UL 2447
OVERFILL PREVENTION EQUIPMENT	NO	☒	A	EBW defender drop tube valve part # 708591922 UL / ULC 2583
GASKETS & SEALS (installs after 10/13/18)	NO	☒	B	
JOINT DOPES & ADHESIVES (installs after 10/13/18)	NO	☒	B	Gasolila E-seal

Methods:

- A. Certification or listing of UST system equipment or components by a nationally recognized, independent testing laboratory for use with the regulated substance stored.
- B. Equipment or manufacturer approval. The manufacturer's approval must be in writing, indicate an affirmative statement of compatibility, specify the range of biofuel blends the component is compatible with, and be from the equipment or component manufacturer

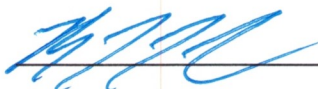
Note: Owners and operators may find American Petroleum Institute's Recommended Practice 1626, *Storing and Handling Ethanol and Gasoline-Ethanol Blends at Distribution Terminals and Filling Stations*, useful in complying with the compatibility requirements.

In order to be in compliance with the 2015 federal UST regulation compatibility requirements for storing biofuels, you must keep documentation of compatibility of the UST system components listed on this page as long as you store the fuel.

For your records, you should update this checklist each time you repair or replace components of your UST system to ensure you have all the required compatibility documentation while storing biofuels.

Checklist Completed By: print name: Bruce J Fatlan Jr

date completed: 8/11/20

signature: 

position/title: President



Franklin Fueling Systems

August 5, 2020

Josh McCoy
Fatlan Trucking and Excavation Ltd
6700 S State Rt 53
Gardner Illinois 60424
masmadmic2@gmail.com
Bruce Fatlan owner
bruce@fatlantrucking.com

RE: Fuel Compatibility

This letter is in reference to the following site:

Casey's #3901
1725 PJ Keller Hwy
Lexington, IL 61753

Parts and equipment listed are to have been manufactured within calendar year of this letter.

This letter affirms that the list of referenced products below has UL/ULC **79A** Approval and is compatible with the following fuels:

E85

Compatible equipment/models:

ISTMR2-VLX-XX-402731901

Sincerely

Loren Swalheim
Director, Global Technical Services
Franklin Fueling System



August 5, 2020

Josh McCoy
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Gardner Illinois 60424
Josh McCoy
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Lexington, IL 61753

Parts and equipment listed are to have been manufactured within calendar year of this letter.

This letter affirms that the list of referenced products below has UL/ULC **842A** Approval and is compatible with the following fuels:

E85

Compatible equipment/models:

662250192-K

Sincerely

A handwritten signature in black ink, appearing to read 'Loren Swalheim'.

Loren Swalheim
Director, Global Technical Services
Franklin Fueling System



August 5, 2020

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1725 PJ Keller Hwy
Lexington, IL 61753

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This letter affirms that the list of referenced products below has UL/ULC 2583 Approval and is compatible with the following fuels:

E85

Compatible equipment/models:

Defender Series Overfill Prevention Valve- Part # 708591922

Sincerely

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Loren Swalheim
Director, Global Technical Services
Franklin Fueling System



August 5, 2020

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This letter affirms that the list of products referenced below is compatible with the following fuels and has UL/ULC Approval

UL971(2004 Standard) /ULC-S679

Compatible fuels

Motor Vehicle Fuels (or MV Fuels) — Petroleum-based hydrocarbon fuels typically found in consumer dispensing stations, such as gasoline or diesel, including blended fuels with max 15% MTBE, 15% Methanol or 30% Ethanol (as identified in Table 15.1 of [UL 971](#), "Nonmetallic Underground Piping for Flammable Liquids").

High-blend Fuels (or HB Fuels) — Motor vehicle fuels with higher than normal gasoline blends with max 50% Methanol or 50% Ethanol (as identified in Table 15.1 of [UL 971](#)).

Concentrated Fuels (or CT Fuels) — Motor vehicle and alternate unblended fuels for up to 100% concentrations of Toluene, Methanol and Ethanol (as identified in Table 15.1 of [UL 971](#)).

Aviation and Marine Fuels (or A&M Fuels) — Motor vehicle and specialty aviation or marine-use fuels for up to 100% kerosene or leaded gasoline (as identified in Table 15.1 of [UL 971](#)).



Compatible equipment/models:

Models XP-100-D, XP-150-D, XP-175-D, XP-200-D, XV-200-D in sizes 1, 1-1/2, 1-3/4 and 2 in. diameter.

Models XP-100-SC, XP-150-SC, XP-175-SC, XP-200-SC in sizes 1, 1-1/2, 1-3/4 and 2 in. diameter.

Sincerely

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Loren Swalheim
Director, Global Technical Services
Franklin Fueling System

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UL2447

Compatible fuels:

ASTM D5798 high-blend ethanol, with ethanol/gasoline blends between 51% - 83% (E51 - E83)-Commercially known as E-85

Compatible equipment/models:

602375004-Dispenser Sump, REB-175-SC-K, STB-175-K, SBK-3-K, TEE-XP-175-K, ELB-XP-175-K, BPT-200-K, 602402901- FRP Turbine Sump, 705545001CI-GKT- Defender Spill Containment

Sincerely



Loren Swalheim
Director, Global Technical Services
Franklin Fueling System

October 10, 2016

RE: Compatibility of Red Thread™ IIA and Dualoy™ Piping Products

To Whom It May Concern:

NOV Fiber Glass Systems has been manufacturing highly-engineered fiberglass pipe for the fuel handling industry for almost 50 years, receiving our first Underwriters Laboratories (UL) listing in 1968. We currently have two product lines serving the Fuel Handling market: Red Thread IIA and Dualoy (3000/L and 3000/LCX). This letter addresses compatibility with current and past product generations.

Red Thread IIA

The Red Thread IIA piping system has been manufactured since 1990. The system was UL listed for alcohol compatibility in 1990, and is UL-971 listed for all fuels and applications per UL Standard 971-2004. In addition, the materials are compatible with Ethanol, Methanol, and Biodiesel blended fuels, through 100 percent concentrations.

Red Thread (manufactured and UL listed from 1968 to 1984) and Red Thread II (manufactured and UL listed from 1984 to 1990) are both compatible with all ethanol fuels up to 100 percent concentration.

Dualoy 3000/L & 3000/LCX

The Dualoy piping systems have been manufactured since 1971. The system was UL listed for alcohol compatibility in 1988, and is UL-971 listed for all fuels and applications per UL Standard 971-2004. In addition, the materials are compatible with Ethanol and Methanol blended fuels, through 100 percent concentrations, and Biodiesel blended fuels.

Prior to 1988, UL did not offer a Listing for alcohol blended fuels, although legacy Dualoy products prior to the Listing were compatible with ethanol and all concentrations of ethanol blended fuels.

If you have any questions or require additional information, please let us know.

Respectfully yours,



Josh Fowler
Manager, Fuel Handling Sales

TECHNICAL DATA

2013

Description

A dark green, opaque, viscous, non-hardening, textured paste with PTFE.

Type

Slow-drying, soft-setting, non-toxic, brushable, without grit. Cures by solvent evaporation providing a durable, long-lasting seal that can be easily disassembled.

Typical Uses

Especially designed for ethanol blended gasoline including E10, E20 & E85.

Substrates

Can be used on brass, copper, stainless steel, aluminum, black pipe, tin, galvanized pipe, ABS plastic, CPVC, nylon, PVC, polyethylene, polypropylene and more.

Chemical Resistance

Excellent resistance to ethanol blended gasoline, kerosene, petroleum solvents, diesel fuel, propane, butane, LPG, water, cutting oils. NOT oxygen.

Set Time

None. For immediate service
Dries to the touch 48-72 hour

Packaging

Available in 1/4 pint, 1/2 pint and pint cans with brush-top lids.

**For Chemical Emergency, Spill, Leak,
Fire, Exposure or Accident Call:**

CHEMTREC - Day or Night. 1-800-424-9300

KEEP OUT OF THE REACH OF CHILDREN

Product Data Sheet

Safety

Contains no lead, is non-toxic, not a skin sensitizer, and is non-corrosive.

Shelf Life: One year in original containers, when stored at room temperature at or below 80°F (27°C)

Wt./Gal.: 11.35 lbs

Color: Medium/Green

Clean Up: Hand cleaner or alcohol.

Temperature Range

-100°F to 600°F (-73°C to 316°C)
Allow to dry thoroughly before exposing to high temperatures. Remains usable in sub-zero weather.

Pressure Range

Up to 10,000 psi when sealing liquids and up to 3,000 psi with gases. Allow to dry, if possible, before subjecting to pressure.

The information presented is in good faith, but no warranty is given, nor are results guaranteed. Federal Process has no control over physical conditions surrounding application conditions. Federal Process disclaims any liability for untoward results.



FEDERAL PROCESS
CORPORATION



CLEVELAND, OHIO | 216.464.6440 • 800.846.7325

www.gasoila.com

MSDS Sheets Available Online

#DS-ES



September 29, 2011

To Whom It May Concern:

The following summarizes the suitability of Xerxes' UL listed underground storage tanks for the storage of ethanol-blended fuels and biodiesel fuels:

Single-Wall Tanks

- Tanks manufactured prior to February 1981 were not designed for the storage of ethanol-blended fuel. Tanks are compatible with all ASTM biodiesel blends.
- Tanks manufactured from February 1981 through June 2005 are designed for the storage of ethanol fuel up to a 10% blend (E10), as well as all ASTM biodiesel blends.
- Tanks manufactured from July 2005 to date are designed for the storage of ethanol fuel blends up to 100% (E100), as well as all ASTM biodiesel blends.

Double-Wall Tanks

- Tanks manufactured prior to April 1990 were designed for the storage of ethanol fuel up to a 10% blend (E10), as well as all ASTM biodiesel blends.
- Tanks manufactured from April 1990 to date are designed for the storage of ethanol fuel blends up to 100% (E100), as well as all ASTM biodiesel blends.

Additionally, all storage tanks designed for storage of ethanol-blended fuel up to 100%, as noted above, are also UL listed under UL's Standard 1316 for the storage of ethanol fuel blends up to 100% (E100).

This summary is intended to address standard production tanks. Different tank models with an appropriate UL listing and designed for higher levels of ethanol storage were available throughout this period of time. Ethanol blend compatibility for such tanks is based on the design specifics of each tank.

Further information regarding product compatibility can be found in the applicable Xerxes limited warranty.

Sincerely,

Thomas Tietjen
Vice President
Sales & Marketing

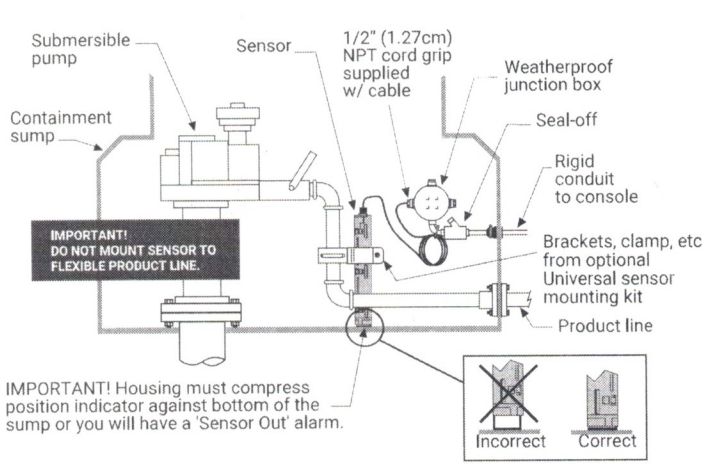
making a **lasting** difference™

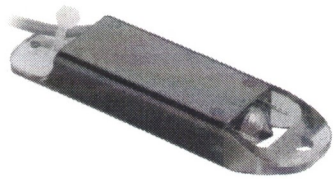
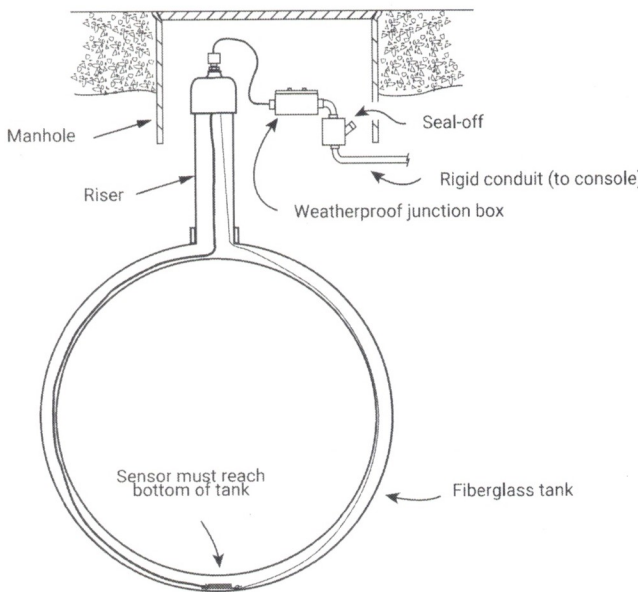
7901 Xerxes Avenue South • Minneapolis • Minnesota • United States • 55431-1288

Ph: 952-887-1890 • Fax: 952-887-1870 • Web: www.xerxes.com

Tank Compatibility

Tank Manufacturer Compatibility with Ethanol Blends			Manufacturer	E10	E100
Manufacturer	E10	E100			
FIBERGLASS¹					
Containment Solutions	✓	✓	Kennedy Tank and Manufacturing Co., Inc.	✓	✓
Owens Corning (single wall between 1965-1994)	✓	✗	Lancaster Tanks and Steel Products	✓	✓
Owens Corning (double wall 1965-7/1/1990)	✓	✗	Lannon Tank Corporation	✓	✓
Owens Corning (double wall 7/2/1990-12/31/1994)	✓	✓	Mass Tank Sales Corp.	✓	✓
Xerxes (single wall prior to 2/1981)	✗	✗	Metal Products Company	✓	✓
Xerxes (single wall prior 2/1981-6/2005)	✓	✗	Mid-South Steel Products, Inc	✓	✓
Xerxes (single wall prior since 7/2005)	✓	✓	Modern Welding Company	✓	✓
Xerxes (double wall prior to 4/1990)	✓	✗	Newberry Tanks & Equipment, LLC	✓	✓
Xerxes (double wall since 4/1990)	✓	✓	Plasteel ¹	✓	✓
			Service Welding & Machine Company	✓	✓
			Southern Tank & Manufacturing Co., Inc.	✓	✓
			Stanwade Metal Products	✓	✓
			Talleres Industriales Potosinos, S.A. de C.V.	✓	✓
STEEL²			Tanques Antillanos C. x A.	✓	✓
Acterra Group Inc.	✓	✓	Watco Tanks, Inc.	✓	✓
Caribbean Tank Technologies Inc.	✓	✓	We-Mac Manufacturing Company	✓	✓
Eaton Sales & Service LLC	✓	✓	Letters stating compatibility		
General Industries	✓	✓	1 PEI		
Greer Steel, Inc.	✓	✓	http://www.pei.org/PublicationsResources/ComplianceFunding/USTComponentCompatibilityLibrary/tabid/882/Default.aspx		
Hall Tank Co.	✓	✓			
Hamilton Tanks	✓	✓	2 STI		
Highland Tank	✓	✓	http://www.steeltank.com/Publications/E85BioDieselandAlternativeFuels/ManufacturerStatementsofCompatibility/tabid/468/Default.aspx		
J.L. Houston Co.	✓	✓			

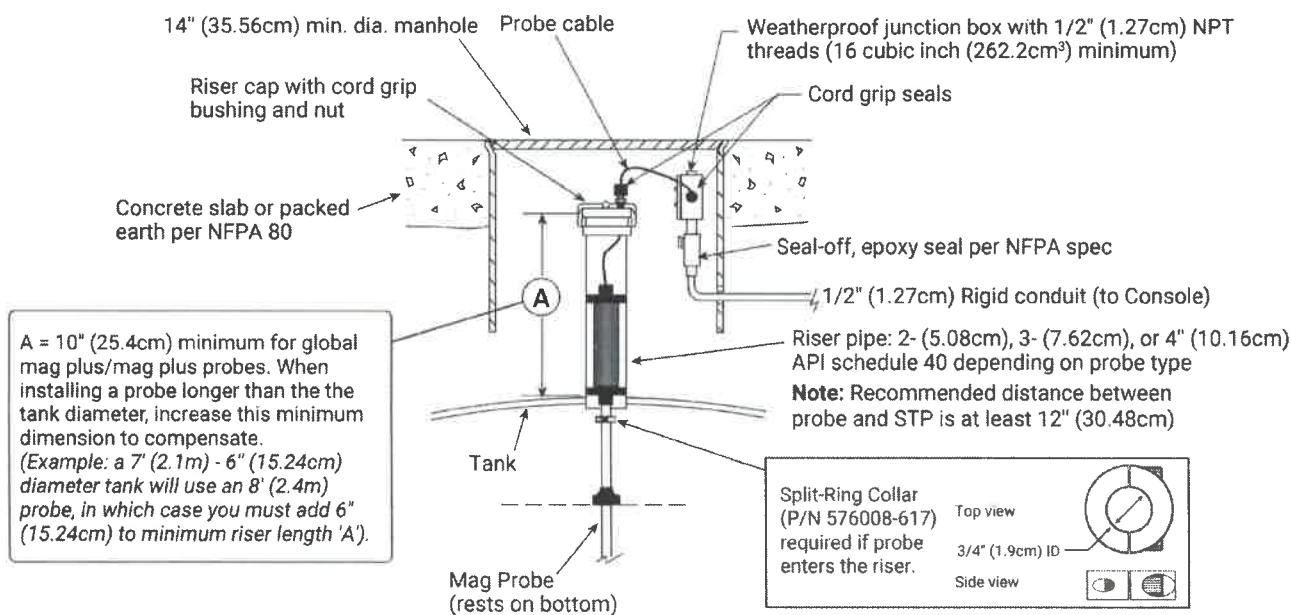
Sensor Description	Position Sensitive Sensor	This sensor is installed in a containment sump or dispenser pan and will detect the presence of, and differentiate between, hydrocarbons and other liquids.					
Part Number	794380-323						
Category	☐ Discriminating ☒ Non-Discriminating ☒ Position Sensitive			☐ Level Sensing ☐ Static Testing ☐ Hydrostatic			
Fuel Compatibility	☒ Gas ☒ Diesel ☒ Kerosene ☒ Jet Fuel ☒ Aviation Gas			☒ E-15 ☒ E-85 ☒ E-100 ☒ Bio-Diesel 20 ☐ Bio-Diesel 100			
				☒ Green Diesel ☐ DEF ☒ Waste Oil ☒ Motor Oil			
Console Compatibility (*International Only ¹)		Recommended Min. Console Software	Sensor Interface Modules				
			Module Part #	Module Description	# of Modules per Console	# of Sensor Inputs per Module	Availability
TLS-450PLUS (8600 Series)		6A or Higher	332812-001	Universal Sensor Module (USM)	Up to 4 - TLS-4XX Up to 8 - TLS-4XX w/ opt. TLS-XB	16	Sold Separately
TLS-450		4A or Higher					
TLS4 (8601 Series) ¹		6A or Higher	330020-750	Universal Sensor Input Output Module (USIOM-AC)	1	12	Included
TLS4i (8601 Series)						330020-751	
TLS4B (8601 Series) ¹							
TLS4c (8601 Series)							
TLS-350/R/PLUS		124/324 or Higher	329358-001	Interstitial Sensor Interface Module	Up to 8	8	Sold Separately
TLS-350J			329356-003	4 Probe / 4 Sensor Interface Module		4	Sold Separately
TLS-300i			330230-001	4 Probe / 8 Sensor Interface Module	8	Included	
TLS-300C			330513-001	2 Probe / 8 Sensor Options			
Alarm Notification	Normal	Sensor in Normal State - No liquid detected					
	Sensor Out	Sensor not resting on bottom of containment or sensor not communicating to ATG/Console					
	Fuel Alarm	Liquid detected in containment area at approx. 1.5" (3.81cm)					
Installation Kit	330020-012	Universal Sensor Mounting Kit (Sold separately)					
Specifications			Example Installation				
Operating Principle	Product Permeable, Reed Switch /Float						
Product Activation Height	Liquid - Approx. 1.5" (3.81cm)						
Operating Temperature	+32 to +140°F (0 to +60°C)						
Dimensions	12" (30.5cm) high, 2.2" (5.6cm) dia.						
Miscellaneous/Notes	Standard Cable Length: 12ft (3.66m).						
Third Party Evaluation Links	TLS-3XX/TLS-450 Series Consoles TLS4 (8601 Series) Consoles						
Product Link	Position Sensitive Sensor						
Warranty with System	1 Yr Parts & Labor						
Warranty (When purchased separately)	1 Yr Parts Only						
Where Used (Typical)	☒ Dispenser Pan ☒ Spill Containment ☒ STP Sump ☐ Convault Tank ☐ Annular Space ☐ Monitoring Well ☐ Oil/Water Separator Tank						

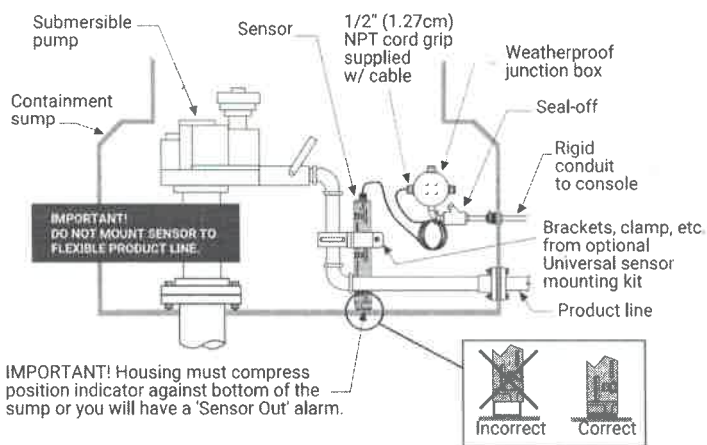
Sensor Description	Solid-State Alternative Ethanol Fluid Interstitial Sensor for Double-Wall Fiberglass Tanks		The Interstitial Sensor for Double-Wall Fiberglass Tanks with high alcohol product uses solid-state liquid level sensing technology to detect liquid in the interstitial space of the tank.			
Part Number	794380-345					
Category	☐ Discriminating ☒ Non-Discriminating ☐ Position Sensitive			☐ Level Sensing ☐ Static Testing ☐ Hydrostatic		
Fuel Compatibility	☒ Gas ☒ Diesel ☒ Kerosene ☒ Jet Fuel ☒ Aviation Gas			☒ E-15 ☒ E-85 ☒ E-100 ☒ Bio-Diesel 20 ☒ Bio-Diesel 100		
Console Compatibility (*International Only ¹)	Recommended Min. Console Software	Sensor Interface Modules				
		Module Part #	Module Description	# of Modules per Console	# of Sensor Inputs per Module	Availability
TLS-450PLUS (8600 Series)	6A or Higher	332812-001	Universal Sensor Module (USM)	Up to 4 - TLS-4XX Up to 8 - TLS-4XX w/ opt. TLS-XB	16	Sold Separately
TLS-450	4A or Higher					
TLS4 (8601 Series) ¹	6A or Higher	330020-750	Universal Sensor Input Out-put Module (USIOM-AC)	1	12	Included
TLS4i (8601 Series)						
TLS4B (8601 Series) ¹		330020-751			6	
TLS4c (8601 Series)						
TLS-350/R/PLUS	124/324 or Higher	329956-001	Type A Sensor Interface Module	Up to 8	8	Sold Separately
TLS-350J	N/A					
TLS-300i						
TLS-300C						
Alarm Notification	Normal	Sensor in Normal State - No liquid detected				
	Fuel Alarm	Liquid detected				
	Sensor Out	Sensor not communicating to ATG/Console				
Specifications			Example Installation			
Operating Principle	Optical - looking at phase changes in the light beams by causing them to interact or interfere with one another					
Product Activation Height	Fuel or Water <0.2" (0.5cm); E85 <0.4" (1cm)					
Operating Temperature	-40 to +122°F (-40 to +50°C)					
Dimensions	4.3" (11cm) length, 1.5" (3.8cm) width, 0.5" (1.3cm) thick					
Miscellaneous/Notes	Standard Cable 25ft (7.6m) fits 4 to 10ft (1.2 to 3m) I.D. fiberglass tanks					
Third Party Evaluation Links	TLS-350/TLS-450 Series Consoles TLS4 (8601 Series) Consoles					
Product Link	Solid-State Alternative Ethanol Fluid Interstitial Sensor					
Warranty with System	1 Yr Parts & Labor					
Warranty (When purchased separately)	1 Yr Parts Only					
Where Used (Typical)	☒ Convault Tank ☒ Annular Space ☐ Monitoring Well ☐ Oil/Water Separator Tank					
☐ Dispenser Pan ☐ Spill Containment ☐ STP Sump						

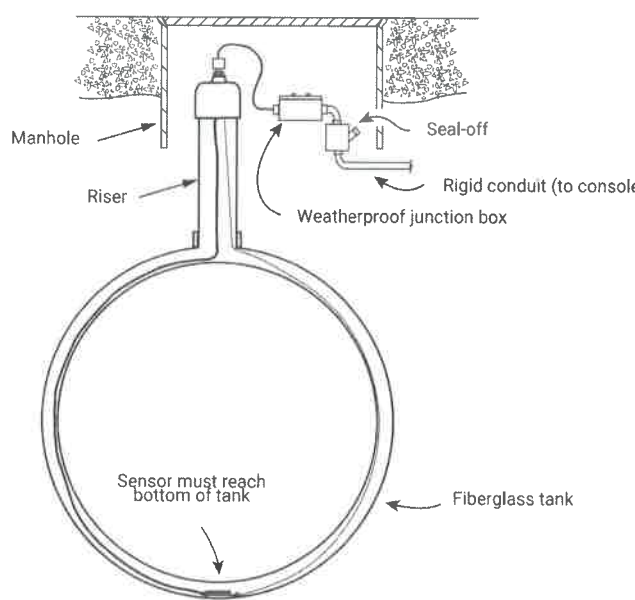


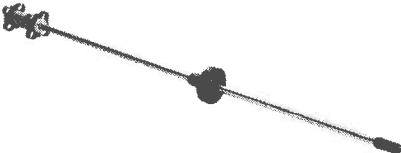
Probe Description & Product Application	Stainless Steel Mag Plus In-Tank Probe for Monitoring Alternative Fluids with No Water Detection in both USTs and ASTs						
Specific Products Monitored / Product Compatibility	Part # & Description		Approved Products		Monitoring Functionality Options		
	Leak Detection / BIR - Accuchart Probes 1. 846397-4XX Stainless Steel (SS) In-Tank Probe with High Grade Polymer (HGP) Canister with No Water Detection & 0.1 GPH Testing Capability, UL 2. 846397-5XX SS In-Tank Probe with HGP Canister with No Water Detection & 0.2GPH Testing Capability, UL 3. 846391-4XX SS In-Tank Probe with Aluminum (AL) Canister with No Water Detection & 0.1 GPH Testing Capability, UL 4. 846391-5XX SS In-Tank Probe with AL Canister with No Water Detection & 0.2 GPH Testing Capability, UL No Leak Detection/Inventory Only Probes 1. 846397-6XX SS with HGP Canister with No Water Detection & No Leak Detection/ Inventory Only, UL 2. 846391-6XX SS with AL Canister with No Water Detection & No Leak Detection/ Inventory Only, UL		Alcohol (<=100% Alcohol)*		A. 0.1 GPH static in-tank testing for USTs only		
			Fuel Oil #6		B. 0.2GPH static in-tank testing for USTs only		
			Propylene Glycol		C. 0.2 GPH Continuous Statistical Leak Detection (CSLD) for USTs only		
			Methyl Alcohol*				
			Methanol (<=100% Alcohol)*		D. No Leak Detection / Inventory Only for USTs & ASTs		
			ETBE (<=100% Ether)		E. BIR – Accuchart for USTs only		
			Ethanol (<=100% Alcohol) includes E85*		* Limited to E85 for ATEX probes		
			MTBE (<=100% Ether)				
			Used Oil				
			Ethylene Glycol				
			Windshield Washer Fluid				
			DEF (AdBlue)				
Console Compatibility	Maximum Probes / Console	Probe Interface Modules					
		Module Part #	Module Description	# of Modules per Console	# of Probe Inputs per Module	Availability	
		64 (32 with BIR)	332812-001	Universal Sensor Module (USM) Interface for Probes, Sensors, and DPLLD	Up to 4	16	Sold Separately (either Factory Installed or as a Spare Module)
	TLS4i (8601 Series)	4	No module required, probe input capability factory installed				
	TLS4c (8601 Series)	2					
	TLS-350/R/PLUS	16	329356-002	4-Input Probe Interface Module	4	4	Sold Separately (either Factory Installed or as a Spare Module)
	TLS-300i	4	No module required, probe input capability factory installed				
TLS-300C	2						

Float Installation Kits	Part # & Description	Float Size	Cable Lengths	Min/Max Probe Length
	846400-0X4 Mag Plus Alternative Fluids Float Kit - No Water Float	4" (10.16cm)	5' (1.5m), 10' (3.05m), 20' (6.1m)	48" (1.2m) - 144" (3.66m)
	846400-3X4 Mag Plus Alternative Fluids Float Kit - No Water Float	3" (7.62cm)		
	846400-1X4 Mag Plus Alternative Fluids Float Kit - No Water Float	2" (5.08cm)		
Other Installation Accessories	312020-952 4" (10.16cm) NPT Riser Cap and Ring Kit for In-Tank Probes 330020-282 4" (10.16cm) Threaded NPT Riser Cap for In-Tank Probes			
Specifications	Product	Water		
Measurement Accuracy	+/- 0.0300" (0.762mm)	N/A		
Resolution - One Sample Reading	+/- 0.002857" (0.072571mm)	N/A		
Minimum Measurement - 2" (5.08cm) Float Kits	3.23" (8.2cm)	N/A		
Minimum Measurement - 3" (7.62cm) Float Kits	3.04" (7.72cm)	N/A		
Minimum Measurement - 4" (10.16cm) Float Kits	3.04" (7.72cm)	N/A		
Operating (Working) Temperature Range	-40 to +122°F (-40 to +50°C)			
Third Party Evaluation / Agency Listings & Links	UL, cUL, ATEX, IECEx			
	http://www.nwglde.org/evals/veeder_root_j.html			
Product Installation Guide Link	https://www.veeder.com/us/technical-document-library			

Example Installation


Sensor Description	Position Sensitive Sensor	This sensor is installed in a containment sump or dispenser pan and will detect the presence of, and differentiate between, hydrocarbons and other liquids.				
Part Number	794380-323					
Category	☐ Discriminating ☒ Non-Discriminating ☒ Position Sensitive			☐ Level Sensing ☐ Static Testing ☐ Hydrostatic		
Fuel Compatibility	☒ Gas ☒ Diesel ☒ Kerosene ☒ Jet Fuel ☒ Aviation Gas			☒ E-15 ☒ E-85 ☒ E-100 ☒ Bio-Diesel 20 ☐ Bio-Diesel 100		
						
Console Compatibility (*International Only ¹)	Recommended Min. Console Software	Sensor Interface Modules				
		Module Part #	Module Description	# of Modules per Console	# of Sensor Inputs per Module	Availability
TLS-450PLUS (8600 Series)	6A or Higher	332812-001	Universal Sensor Module (USM)	Up to 4 - TLS-4XX Up to 8 - TLS-4XX w/ opt. TLS-XB	16	Sold Separately
TLS-450	4A or Higher					
TLS4 (8601 Series) ¹	6A or Higher	330020-750	Universal Sensor Input Output Module (USIOM-AC)	1	12	Included
TLS4i (8601 Series)						
TLS4B (8601 Series) ¹		330020-751			6	
TLS4c (8601 Series)						
TLS-350/R/PLUS	124/324 or Higher	329358-001	Interstitial Sensor Interface Module	Up to 8	8	Sold Separately
TLS-350J		329356-003	4 Probe / 4 Sensor Interface Module	1	4	Sold Separately
TLS-300i		330230-001	4 Probe / 8 Sensor Interface Module		8	Included
TLS-300C		330513-001	2 Probe / 8 Sensor Options			
Alarm Notification	Normal	Sensor in Normal State - No liquid detected				
	Sensor Out	Sensor not resting on bottom of containment or sensor not communicating to ATG/Console				
	Fuel Alarm	Liquid detected in containment area at approx. 1.5" (3.81cm)				
Installation Kit	330020-012	Universal Sensor Mounting Kit (Sold separately)				
Specifications	Example Installation					
Operating Principle	Product Permeable, Reed Switch /Float					
Product Activation Height	Liquid - Approx. 1.5" (3.81cm)					
Operating Temperature	+32 to +140°F (0 to +60°C)					
Dimensions	12" (30.5cm) high, 2.2" (5.6cm) dia.					
Miscellaneous/Notes	Standard Cable Length: 12ft (3.66m).					
Third Party Evaluation Links	TLS-3XX/TLS-450 Series Consoles TLS4 (8601 Series) Consoles					
Product Link	Position Sensitive Sensor					
Warranty with System	1 Yr Parts & Labor					
Warranty (When purchased separately)	1 Yr Parts Only					
Where Used (Typical)	☒ Dispenser Pan ☒ Spill Containment ☒ STP Sump ☐ Convault Tank ☐ Annular Space ☐ Monitoring Well ☐ Oil/Water Separator Tank					
 IMPORTANT! Housing must compress position indicator against bottom of the sump or you will have a 'Sensor Out' alarm.  Incorrect  Correct						

Sensor Description	Solid-State Alternative Ethanol Fluid Interstitial Sensor for Double-Wall Fiberglass Tanks		The Interstitial Sensor for Double-Wall Fiberglass Tanks with high alcohol product uses solid-state liquid level sensing technology to detect liquid in the interstitial space of the tank.				
Part Number	794380-345						
Category	☐ Discriminating ☒ Non-Discriminating ☐ Position Sensitive			☐ Level Sensing ☐ Static Testing ☐ Hydrostatic			
Fuel Compatibility	☒ Gas ☒ Diesel ☒ Kerosene ☒ Jet Fuel ☒ Aviation Gas			☒ E-15 ☒ E-85 ☒ E-100 ☒ Bio-Diesel 20 ☒ Bio-Diesel 100			
Console Compatibility (*International Only ¹)	Recommended Min. Console Software	Sensor Interface Modules					
		Module Part #	Module Description	# of Modules per Console	# of Sensor Inputs per Module	Availability	
	TLS-450PLUS (8600 Series)	6A or Higher	332812-001	Universal Sensor Module (USM)	Up to 4 - TLS-4XX Up to 8 - TLS-4XX w/ opt. TLS-XB	16	Sold Separately
	TLS-450	4A or Higher					
	TLS4 (8601 Series) ¹	6A or Higher	330020-750	Universal Sensor Input Out-put Module (USIOM-AC)	1	12	Included
	TLS4i (8601 Series)						
	TLS4B (8601 Series) ¹		330020-751			6	
	TLS4c (8601 Series)						
	TLS-350/R/PLUS	124/324 or Higher	329956-001	Type A Sensor Interface Module	Up to 8	8	Sold Separately
	TLS-350J	N/A					
TLS-300i							
TLS-300C							
Alarm Notification	Normal	Sensor in Normal State - No liquid detected					
	Fuel Alarm	Liquid detected					
	Sensor Out	Sensor not communicating to ATG/Console					
Specifications			Example Installation				
Operating Principle	Optical - looking at phase changes in the light beams by causing them to interact or interfere with one another						
Product Activation Height	Fuel or Water <0.2" (0.5cm); E85 <0.4" (1cm)						
Operating Temperature	-40 to +122°F (-40 to +50°C)						
Dimensions	4.3" (11cm) length, 1.5" (3.8cm) width, 0.5" (1.3cm) thick						
Miscellaneous/Notes	Standard Cable 25ft (7.6m) fits 4 to 10ft (1.2 to 3m) I.D. fiberglass tanks						
Third Party Evaluation Links	TLS-350/TLS-450 Series Consoles TLS4 (8601 Series) Consoles						
Product Link	Solid-State Alternative Ethanol Fluid Interstitial Sensor						
Warranty with System	1 Yr Parts & Labor						
Warranty (When purchased separately)	1 Yr Parts Only						
Where Used (Typical)	☒ Convault Tank ☒ Annular Space ☐ Monitoring Well ☐ Oil/Water Separator Tank						
☐ Dispenser Pan ☐ Spill Containment ☐ STP Sump							

Probe Description & Product Application	Stainless Steel Mag Plus In-Tank Probe for Monitoring Alternative Fluids with No Water Detection in both USTs and ASTs						
Specific Products Monitored / Product Compatibility	Part # & Description		Approved Products		Monitoring Functionality Options		
	Leak Detection / BIR - Accuchart Probes 1. 846397-4XX Stainless Steel (SS) In-Tank Probe with High Grade Polymer (HGP) Canister with No Water Detection & 0.1 GPH Testing Capability, UL 2. 846397-5XX SS In-Tank Probe with HGP Canister with No Water Detection & 0.2GPH Testing Capability, UL 3. 846391-4XX SS In-Tank Probe with Aluminum (AL) Canister with No Water Detection & 0.1 GPH Testing Capability, UL 4. 846391-5XX SS In-Tank Probe with AL Canister with No Water Detection & 0.2 GPH Testing Capability, UL No Leak Detection/Inventory Only Probes 1. 846397-6XX SS with HGP Canister with No Water Detection & No Leak Detection/ Inventory Only, UL 2. 846391-6XX SS with AL Canister with No Water Detection & No Leak Detection/ Inventory Only, UL		Alcohol (<=100% Alcohol)*		A. 0.1 GPH static in-tank testing for USTs only		
			Fuel Oil #6		B. 0.2GPH static in-tank testing for USTs only		
			Propylene Glycol		C. 0.2 GPH Continuous Statistical Leak Detection (CSLD) for USTs only		
			Methyl Alcohol*				
			Methanol (<=100% Alcohol)*		D. No Leak Detection / Inventory Only for USTs & ASTs		
			ETBE (<=100% Ether)		E. BIR – Accuchart for USTs only		
			Ethanol (<=100% Alcohol) includes E85*		* Limited to E85 for ATEX probes		
			MTBE (<=100% Ether)				
			Used Oil				
			Ethylene Glycol				
			Windshield Washer Fluid				
			DEF (AdBlue)				
Console Compatibility	Maximum Probes / Console	Probe Interface Modules					
		Module Part #	Module Description	# of Modules per Console	# of Probe Inputs per Module	Availability	
		64 (32 with BIR)	332812-001	Universal Sensor Module (USM) Interface for Probes, Sensors, and DPLLD	Up to 4	16	Sold Separately (either Factory Installed or as a Spare Module)
	TLS4i (8601 Series)	4	No module required, probe input capability factory installed				
	TLS4c (8601 Series)	2					
	TLS-350/R/PLUS	16	329356-002	4-Input Probe Interface Module	4	4	Sold Separately (either Factory Installed or as a Spare Module)
	TLS-300i	4	No module required, probe input capability factory installed				
TLS-300C	2						



Franklin Fueling Systems

August 5, 2020

Josh McCoy
Fatlan Trucking and Excavation Ltd
6700 S State Rt 53
Gardner Illinois 60424
masmadmic2@gmail.com
Bruce Fatlan owner
bruce@fatlantrucking.com

RE: Fuel Compatibility

This letter is in reference to the following site:

Casey's #3901
1725 PJ Keller Hwy
Lexington, IL 61753

Parts and equipment listed are to have been manufactured within calendar year of this letter.

This letter affirms that the list of referenced products below has UL/ULC **79A** Approval and is compatible with the following fuels:

E85

Compatible equipment/models:

ISTMR2-VLX-XX-402731901

Sincerely

Loren Swalheim
Director, Global Technical Services
Franklin Fueling System



August 5, 2020

Josh McCoy
Fatlan Trucking and Excavation Ltd
6700 S State Rt 53
Gardner Illinois 60424
Josh McCoy
masmadmic2@gmail.com

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Casey's #3901
1725 PJ Keller Hwy
Lexington, IL 61753

Parts and equipment listed are to have been manufactured within calendar year of this letter.

This letter affirms that the list of referenced products below has UL/ULC **842A** Approval and is compatible with the following fuels:

E85

Compatible equipment/models:

662250192-K

Sincerely

A handwritten signature in black ink, appearing to read 'Loren Swalheim'.

Loren Swalheim
Director, Global Technical Services
Franklin Fueling System



August 5, 2020

Josh McCoy
Fatlan Trucking and Excavation Ltd
6700 S State Rt 53
Gardner Illinois 60424
Josh McCoy
masmadmic2@gmail.com

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Casey's #3901
1725 PJ Keller Hwy
Lexington, IL 61753

Parts and equipment listed are to have been manufactured within calendar year of this letter.

This letter affirms that the list of referenced products below has UL/ULC 2583 Approval and is compatible with the following fuels:

E85

Compatible equipment/models:

Defender Series Overfill Prevention Valve- Part # 708591922

Sincerely

A handwritten signature in black ink, appearing to read 'Loren Swalheim'.

Loren Swalheim
Director, Global Technical Services
Franklin Fueling System

August 5, 2020

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This letter affirms that the list of products referenced below is compatible with the following fuels and has UL/ULC Approval

UL971(2004 Standard) /ULC-S679

Compatible fuels

Motor Vehicle Fuels (or MV Fuels) — Petroleum-based hydrocarbon fuels typically found in consumer dispensing stations, such as gasoline or diesel, including blended fuels with max 15% MTBE, 15% Methanol or 30% Ethanol (as identified in Table 15.1 of UL 971, "Nonmetallic Underground Piping for Flammable Liquids").

High-blend Fuels (or HB Fuels) — Motor vehicle fuels with higher than normal gasoline blends with max 50% Methanol or 50% Ethanol (as identified in Table 15.1 of UL 971).

Concentrated Fuels (or CT Fuels) — Motor vehicle and alternate unblended fuels for up to 100% concentrations of Toluene, Methanol and Ethanol (as identified in Table 15.1 of UL 971).

Aviation and Marine Fuels (or A&M Fuels) — Motor vehicle and specialty aviation or marine-use fuels for up to 100% kerosene or leaded gasoline (as identified in Table 15.1 of UL 971).



Compatible equipment/models:

Models XP-100-D, XP-150-D, XP-175-D, XP-200-D, XV-200-D in sizes 1, 1-1/2, 1-3/4 and 2 in. diameter.

Models XP-100-SC, XP-150-SC, XP-175-SC, XP-200-SC in sizes 1, 1-1/2, 1-3/4 and 2 in. diameter.

Sincerely



Loren Swalheim
Director, Global Technical Services
Franklin Fueling System



August 5, 2020

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Parts and equipment listed are to have been manufactured within calendar year of this letter.

This letter affirms that the list of products referenced below is compatible with the following fuels and has UL/ULC Approval

UL2447

Compatible fuels:

ASTM D5798 high-blend ethanol, with ethanol/gasoline blends between 51% - 83% (E51 - E83)-Commercially known as E-85

Compatible equipment/models:

602375004-Dispenser Sump, REB-175-SC-K, STB-175-K, SBK-3-K, TEE-XP-175-K, ELB-XP-175-K, BPT-200-K, 602402901- FRP Turbine Sump, 705545001CI-GKT- Defender Spill Containment

Sincerely

A handwritten signature in black ink, appearing to read "Loren Swalheim".

Loren Swalheim
Director, Global Technical Services
Franklin Fueling System

October 10, 2016

RE: Compatibility of Red Thread™ IIA and Dualoy™ Piping Products

To Whom It May Concern:

NOV Fiber Glass Systems has been manufacturing highly-engineered fiberglass pipe for the fuel handling industry for almost 50 years, receiving our first Underwriters Laboratories (UL) listing in 1968. We currently have two product lines serving the Fuel Handling market: Red Thread IIA and Dualoy (3000/L and 3000/LCX). This letter addresses compatibility with current and past product generations.

Red Thread IIA

The Red Thread IIA piping system has been manufactured since 1990. The system was UL listed for alcohol compatibility in 1990, and is UL-971 listed for all fuels and applications per UL Standard 971-2004. In addition, the materials are compatible with Ethanol, Methanol, and Biodiesel blended fuels, through 100 percent concentrations.

Red Thread (manufactured and UL listed from 1968 to 1984) and Red Thread II (manufactured and UL listed from 1984 to 1990) are both compatible with all ethanol fuels up to 100 percent concentration.

Dualoy 3000/L & 3000/LCX

The Dualoy piping systems have been manufactured since 1971. The system was UL listed for alcohol compatibility in 1988, and is UL-971 listed for all fuels and applications per UL Standard 971-2004. In addition, the materials are compatible with Ethanol and Methanol blended fuels, through 100 percent concentrations, and Biodiesel blended fuels.

Prior to 1988, UL did not offer a Listing for alcohol blended fuels, although legacy Dualoy products prior to the Listing were compatible with ethanol and all concentrations of ethanol blended fuels.

If you have any questions or require additional information, please let us know.

Respectfully yours,



Josh Fowler
Manager, Fuel Handling Sales

TECHNICAL DATA

2013

Description

A dark green, opaque, viscous, non-hardening, textured paste with PTFE.

Type

Slow-drying, soft-setting, non-toxic, brushable, without grit. Cures by solvent evaporation providing a durable, long-lasting seal that can be easily disassembled.

Typical Uses

Especially designed for ethanol blended gasoline including E10, E20 & E85.

Substrates

Can be used on brass, copper, stainless steel, aluminum, black pipe, tin, galvanized pipe, ABS plastic, CPVC, nylon, PVC, polyethylene, polypropylene and more.

Chemical Resistance

Excellent resistance to ethanol blended gasoline, kerosene, petroleum solvents, diesel fuel, propane, butane, LPG, water, cutting oils. NOT oxygen.

Set Time

None. For immediate service
Dries to the touch 48-72 hour

Packaging

Available in 1/4 pint, 1/2 pint and pint cans with brush-top lids.

**For Chemical Emergency, Spill, Leak,
Fire, Exposure or Accident Call:**

CHEMTREC - Day or Night. 1-800-424-9300

KEEP OUT OF THE REACH OF CHILDREN

Product Data Sheet

Safety

Contains no lead, is non-toxic, not a skin sensitizer, and is non-corrosive.

Shelf Life: One year in original containers, when stored at room temperature at or below 80°F (27°C)

Wt./Gal.: 11.35 lbs

Color: Medium/Green

Clean Up: Hand cleaner or alcohol.

Temperature Range

-100°F to 600°F (-73°C to 316°C)
Allow to dry thoroughly before exposing to high temperatures. Remains usable in sub-zero weather.

Pressure Range

Up to 10,000 psi when sealing liquids and up to 3,000 psi with gases. Allow to dry, if possible, before subjecting to pressure.

The information presented is in good faith, but no warranty is given, nor are results guaranteed. Federal Process has no control over physical conditions surrounding application conditions. Federal Process disclaims any liability for untoward results.



FEDERAL PROCESS
CORPORATION



CLEVELAND, OHIO | 216.464.6440 • 800.846.7325

www.gasoila.com

MSDS Sheets Available Online

#DS-ES



September 29, 2011

To Whom It May Concern:

The following summarizes the suitability of Xerxes' UL listed underground storage tanks for the storage of ethanol-blended fuels and biodiesel fuels:

Single-Wall Tanks

- Tanks manufactured prior to February 1981 were not designed for the storage of ethanol-blended fuel. Tanks are compatible with all ASTM biodiesel blends.
- Tanks manufactured from February 1981 through June 2005 are designed for the storage of ethanol fuel up to a 10% blend (E10), as well as all ASTM biodiesel blends.
- Tanks manufactured from July 2005 to date are designed for the storage of ethanol fuel blends up to 100% (E100), as well as all ASTM biodiesel blends.

Double-Wall Tanks

- Tanks manufactured prior to April 1990 were designed for the storage of ethanol fuel up to a 10% blend (E10), as well as all ASTM biodiesel blends.
- Tanks manufactured from April 1990 to date are designed for the storage of ethanol fuel blends up to 100% (E100), as well as all ASTM biodiesel blends.

Additionally, all storage tanks designed for storage of ethanol-blended fuel up to 100%, as noted above, are also UL listed under UL's Standard 1316 for the storage of ethanol fuel blends up to 100% (E100).

This summary is intended to address standard production tanks. Different tank models with an appropriate UL listing and designed for higher levels of ethanol storage were available throughout this period of time. Ethanol blend compatibility for such tanks is based on the design specifics of each tank.

Further information regarding product compatibility can be found in the applicable Xerxes limited warranty.

Sincerely,

Thomas Tietjen
Vice President
Sales & Marketing

making a **lasting** difference™

7901 Xerxes Avenue South • Minneapolis • Minnesota • United States • 55431-1288
Ph: 952-887-1890 • **Fax:** 952-887-1870 • **Web:** www.xerxes.com

Tank Compatibility

Tank Manufacturer Compatibility with Ethanol Blends			Manufacturer	E10	E100
Manufacturer					
FIBERGLASS¹					
Containment Solutions				✓	✓
Owens Corning (single wall between 1965-1994)				✓	✗
Owens Corning (double wall 1965-7/1/1990)				✓	✗
Owens Corning (double wall 7/2/1990-12/31/1994)				✓	✓
Xerox (single wall prior to 2/1981)				✗	✗
Xerox (single wall prior 2/1981-6/2005)				✓	✗
Xerox (single wall prior since 7/2005)				✓	✓
Xerox (double wall prior to 4/1990)				✓	✗
Xerox (double wall since 4/1990)				✓	✓
STEEL²					
Acterra Group Inc.				✓	✓
Caribbean Tank Technologies Inc.				✓	✓
Eaton Sales & Service LLC				✓	✓
General Industries				✓	✓
Greer Steel, Inc.				✓	✓
Hall Tank Co.				✓	✓
Hamilton Tanks				✓	✓
Highland Tank				✓	✓
J.L. Houston Co.				✓	✓
			Kennedy Tank and Manufacturing Co., Inc.	✓	✓
			Lancaster Tanks and Steel Products	✓	✓
			Lannon Tank Corporation	✓	✓
			Mass Tank Sales Corp.	✓	✓
			Metal Products Company	✓	✓
			Mid-South Steel Products, Inc	✓	✓
			Modern Welding Company	✓	✓
			Newberry Tanks & Equipment, LLC	✓	✓
			Plasteel ¹	✓	✓
			Service Welding & Machine Company	✓	✓
			Southern Tank & Manufacturing Co., Inc.	✓	✓
			Stanwade Metal Products	✓	✓
			Talleres Industriales Potosinos, S.A. de C.V.	✓	✓
			Tanques Antillanos C. x A.	✓	✓
			Watco Tanks, Inc.	✓	✓
			We-Mac Manufacturing Company	✓	✓
			Letters stating compatibility		
			1 PEI		
			http://www.pei.org/PublicationsResources/ComplianceFunding/USTComponentCompatibilityLibrary/tabid/882/Default.aspx		
			2 STI		
			http://www.steel tank.com/Publications/E85BioDieselandAlternativeFuels/ManufacturerStatementsofCompatibility/tabid/468/Default.aspx		