



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: 6047208  
 Facility Owner: Speedway, LLC  
 Facility Name: Speedway #7269  
 Street Address: 5401 State Route 111  
 City: Pontoon Beach, IL 62040  
 County: Madison

**UST Information:**

Tank ID Number: #7  
 Tank Material: Steel \_\_\_\_\_  
 FRP X  
 Single Wall \_\_\_\_\_ Double Wall X  
 Tank Volume: 8,000 Gallon  
 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	<b>YES</b>	BOTH	DWT-6 DWB2, Containment Solutions UL Standard 1316 (includes tank sumps)
PIPING (incl. shear valves, flex connectors)	NO	<b>YES</b>	A	UPP001-075-063-028PSE UPP pipe and fittings EN14125:2013 approved Flexing Flex Connectors: UL 2039 listed for above and below ground installation for use with gasoline, gas alcohol blends (up to E-85), DSL & BioDSL
CONTAINMENT SUMPS	NO	<b>YES</b>	B	LMM Series Containment Sumps for dispensers Tank Sumps included under containment solutions documentation
PUMPS (STPs/Suction; Dispensers, hoses, nozzles)	NO	<b>YES</b>	B	FE Petro #STPAG STPAG (AG Compatible) models are UL and cUL listed for fuel mixtures containing DSL fuel with up to 20% BioDSL, 100% BioDSL, up to 85% ethanol with gasoline, and 20% MTBE, 20%ETBE or 17% TAME with gasoline

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	YES	BOTH	Franklin Fueling Incon Probes, UL2447 Tank Gauge Probe: Incon FMP-LLC-101 ELLD: Incon TS-LS500/2 Sump Sensor: Incon FM-ULS Int. Sensor: Incon FM-EIS
SPILL PREVENTION EQUIPMENT	NO	YES	B	OPW 1C-3101P
OVERFILL PREVENTION EQUIPMENT	NO	YES	B	Franklin Fueling OPV: 708591922 UL2583 Listed and ULc listed CARB certified
GASKETS & SEALS (installs after 10/13/18)	NO	YES	B	711LPC-0300 3 Inch Cap Vapor Recovery Low Profile (E85 Approved) 61SALP-MA 4 Inch Nickel Plated E85 Evr Approved Fill Swivel Adapter
JOINT DOPES & ADHESIVES (installs after 10/13/18)	NO	YES	B	Gasola E-Seal GE16 Excellent resistance to gasoline, ethanol blended gasoline such as E10 & E85, petroleum solvents, kerosene DSL oil, BioDSL propane, jet fuels, butane, LPG, cutting oils, ammonia, aliphatic solvents, acids, steam and potable water.


**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: Nate Lawrence date completed: 9/13/21  
signature:  position/title: VP Operations



August 1, 2011

#### Fuel Storage Compatibility

This letter applies to all fiberglass fuel storage products manufactured since the inception of Containment Solutions, Inc. (CSI) on 1/1/1995 including:

- Single-wall underground tanks
- Double-wall underground tanks
- Triple-wall underground tanks
- ReTank® (In situ double-wall tank upgrade)
- BTU® (Bio fuel Tank Upgrade for fluid compatibility)
- Single-wall tank sumps
- Double-wall tank sumps

CSI single, double, and triple wall tanks are listed by Underwriters Laboratories Inc., under **UL Standard 1316 - Glass-Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohols, and Alcohol-Gasoline Mixtures.**

**All of the above Containment Solutions' products are compatible for use with the following fuels and fuel blends:**

- Gasoline, jet fuel, aviation gasoline, motor oil (new or used), kerosene, diesel motor fuel
- Alcohol-gasoline blend motor fuels
  - Gasoline-ethanol blends with up to 100% ethanol
  - Gasoline-methanol blends with up to 100% methanol
- Biodiesel-diesel blends with up to 100% biodiesel (B100 per ASTM)
- Oxygenated motor fuels with up to 20% (by volume) methyl tertiary butyl ether (MTBE), ethyl tertiary butyl ether (ETBE), di-isopropyl ether (DIPE), tertiary butyl alcohol (TBA), tertiary amyl methyl ether (TAME), or tertiary amyl ethyl ether (TAE)
- Diesel fuel oil

For more information on CSI products or CSI Field Services contact:

Containment Solutions  
1-877-CSI-TANK  
[sales@csiproducts.com](mailto:sales@csiproducts.com)  
[www.containmentsolutions.com](http://www.containmentsolutions.com)

Sincerely,

A handwritten signature in black ink, appearing to read 'Ron Shaffer', is written over a light blue horizontal line.

Ron Shaffer  
Vice President Sales & Marketing  
Containment Solutions, Inc.

# LIMITED WARRANTY

## Underground Petroleum Storage Tank Double-wall and Triple-wall Tanks

Containment Solutions, Inc. ("C.S.I.") warrants to owner that new manufactured double-wall and triple-wall underground storage tanks if used in accordance with C.S.I.'s published specifications, operating guidelines, and if installed, operated and maintained in the United States and Canada according to C.S.I.'s published installation instructions, supplemental instructions, and all applicable laws and regulations:

- I. Will not leak for a period of thirty (30) years from date of original delivery due to natural external corrosion.
- II. Will not leak for a period of thirty (30) years from date of original delivery due to internal corrosion, provided the tank is used solely to store the following products with or without water bottoms:
  - A. Diesel fuel oils for oil burning equipment at temperatures not to exceed 150° F.
  - B. Gasoline, Jet fuel, aviation gasoline, motor oil (new or used), kerosene, diesel motor fuel at ambient temperatures.
  - C. Alcohol-gasoline blend motor fuels at ambient temperatures:
    - Gasoline-ethanol blends with up to 100% ethanol.
    - Gasoline-methanol blends with up to 100% methanol.
  - D. Oxygenated motor fuels at ambient temperatures with up to 20% (by volume) methyl tertiary butyl ether (MTBE), ethyl tertiary butyl ether (ETBE), di-isopropyl ether (DIPE), tertiary butyl alcohol (TBA), tertiary amyl methyl ether (TAME), or tertiary amyl ethyl ether (TAE).E.
  - E. Biodiesel-diesel blends with up to 100% biodiesel (B100 per ASTM) at ambient temperatures.
- III. Will not leak for a period of thirty (30) years from date of original delivery due to structural failure (spontaneous breaking or collapse caused by material defects) provided the installation is performed and validated by a qualified installation contractor as defined in the subsequent required conditions.
- IV. Will be free from defects in materials and workmanship for a period of one (1) year following the date of original delivery by C.S.I.

Additional required conditions to warranty effectiveness:

For this warranty to be valid the tank must have been installed by a qualified installer trained in accordance with the C.S.I. contractor training course and all available installation instructions. To be qualified the installing company must have a valid certificate of completion on file with C.S.I. at the time of installation. After initial installation of the tank, the tank installation checklist supplied by C.S.I. must be properly completed by the contractor and the owner's representative, and the owner must retain the completed checklist to verify proper installation of the tank. The completed checklist must be delivered to C.S.I. only at the time of any claim under this warranty, and failure to do so may result in denial of the claim at the discretion of C.S.I. A claimant must give C.S.I. the opportunity to observe and inspect the tank prior to the removal of any backfill surrounding the tank, removal of the tank from the ground, or removal of any factory installed appurtenance, or the claim will be barred.

If any tank is removed from an installation, moved to owner's new location and is intended for active service at the new location, the tank must be recertified by C.S.I. In order to maintain the warranty as originally extended.

C.S.I. WARRANTIES ARE EFFECTIVE UPON PAYMENT IN FULL, AND C.S.I. IS NOT OBLIGATED TO HONOR ANY WARRANTY OR PROVIDE ANY SERVICE UNTIL C.S.I. RECEIVES PAYMENT IN FULL.

What is not covered by the warranty:

The foregoing warranty does not extend to tanks damaged due to acts of God, or failures caused, in whole or in part, by misuse, improper installation, storage of fluids not included in the above mentioned conditions, servicing or lack thereof, maintenance or lack thereof, or operation in excess of their rated capacity, contrary to their recommended use, whether intentional or otherwise, or any other cause or damage of any kind not the fault of C.S.I.

C.S.I. does not warrant any installed product, component, or parts manufactured by others. All consumable parts including but not limited to gaskets and o-rings are excluded from this warranty. Third party repairs or modifications of any kind shall void this warranty.

C.S.I.'S LIABILITY UNDER THIS WARRANTY SHALL BE LIMITED TO, AT OUR OPTION, (I) REPAIR OF THE DEFECTIVE TANK, (II) REFUND OF THE ORIGINAL PURCHASE PRICE OF THE TANK FROM C.S.I., OR (III) DELIVERY OF A REPLACEMENT TANK TO THE POINT OF ORIGINAL DELIVERY. REPLACEMENT TANKS WILL BE PROVIDED BY C.S.I. AND WILL BE EITHER NEW OR RECERTIFIED. ALL RECERTIFIED TANKS HAVE BEEN TESTED TO ENSURE THAT THEY ARE FUNCTIONALLY EQUIVALENT TO A NEW TANK. THE REMEDIES SET FORTH IN THE ABOVE WARRANTY ARE THE ONLY REMEDIES AVAILABLE TO ANY PERSON OR ENTITY FOR BREACH OF WARRANTY OR FOR BREACH OF ANY OTHER COVENANT, "DUTY" OR OBLIGATION ON THE PART OF C.S.I. AS SET FORTH HEREIN. C.S.I. SHALL HAVE NO LIABILITY OR OBLIGATION TO ANY PERSON OR ENTITY FOR BREACH OF ANY OTHER COVENANT, DUTY OR OBLIGATION UNDER THIS WARRANTY EXCEPT AS EXPRESSLY SET FORTH HEREIN. IT IS EXPRESSLY AGREED THAT THIS WARRANTY DOES NOT FAIL OF ITS ESSENTIAL PURPOSE. C.S.I. SHALL HAVE NO LIABILITY FOR TANK INSTALLATION OR REMOVAL COSTS, ENVIRONMENTAL CONTAMINATION, FIRES, EXPLOSIONS OR ANY OTHER CONSEQUENCES ALLEGEDLY ATTRIBUTABLE TO A BREACH OF WARRANTY, OR INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES OF ANY DESCRIPTION, WHETHER ANY SUCH CLAIM OR DAMAGES BE BASED UPON WARRANTY, CONTRACT, NEGLIGENCE, STRICT LIABILITY, TORT, OR OTHERWISE. IN NO EVENT SHALL C.S.I.'S TOTAL LIABILITY HEREUNDER EXCEED THE ORIGINAL PURCHASE PRICE OF THE TANK WHICH GAVE RISE TO SUCH LIABILITY. THE FOREGOING WARRANTY CONSTITUTES C.S.I.'S EXCLUSIVE OBLIGATION AND C.S.I. MAKES NO OTHER WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, WITH RESPECT TO THE TANK OR ANY SERVICE, ADVICE, OR CONSULTATION, IF ANY, FURNISHED TO OWNER BY C.S.I. OR ITS REPRESENTATIVES, WHETHER AS TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE.

Effective Date: 02/11/2014



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February 2014 • All Rights Reserved • Pub. No. TNK 1023L



May 31<sup>st</sup>, 2019

Nate Lawrence  
Lawrence Building Construction  
Ft. Wayne, IN

Dear Mr. Lawrence,

Franklin Fueling Systems certifies that our UPP piping system is certified to be compatible with Fuel Ethanol, also known commercially as E85, containing 51 % to 83 % ethanol by volume under UL-971, file MH25274. Our poly and fiberglass containment range are certified to meet the ASTM D5798 standard which has a provision for compatibility with high blend ethanol within the UL 2447 listing.

Sincerely,

A handwritten signature in black ink, appearing to read "Allan Busch".

Allan Busch  
Senior Product Manager – Piping & Containment Systems  
Franklin Fueling Systems



May 21, 2019

Jeff Scott  
Territory Manger  
Source North America

Dear Mr. Scott,

Franklin Fueling Systems has determined that APT Containment Sumps, specifically the LMM-3915, LMM-3914-36-W to be compatible with Fuel Ethanol, also known commercially as E85, containing 51 % to 83 % ethanol by volume under UL-971, file MH25274. Our poly and fiberglass containment range are certified to meet the ASTM D5798 standard which has a provision for compatibility with high blend ethanol within the UL 2447 listing.

*Per ASTM D5798 within the scope section 1.3 This specification formerly covered Fuel Ethanol (Ed70-Ed85) for Automotive Spark-Ignition Engines, also known commercially as E85. The nomenclature "fuel ethanol" has been changed to "ethanol fuel blends" to distinguish this product from denatured fuel ethanol Specification D4806. To facilitate blending of ethanol fuel blends that meet seasonal vapor pressure requirements, a new lower minimum ethanol content has been established.*

For more information on ASTM D5798 follow the link below:

<https://www.astm.org/Standards/D5798.htm>

Sincerely,

A handwritten signature in black ink, appearing to read "Allan Busch".

Allan Busch  
Senior Product Manager - Piping & Containment Systems  
Franklin Fueling Systems

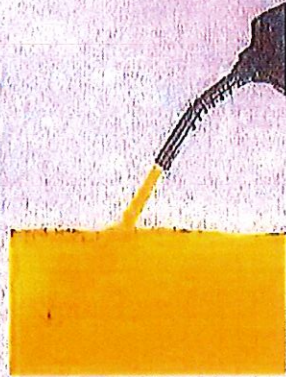
# BIOFUEL SOLUTIONS

Make sure you have the appropriate equipment to meet the biofuel needs of your customers. Check out these benefits available from FE Petro™.



## THE PROPER APPROVALS

FE Petro™ brand STPAG and IST models of submersible turbine pumps (STPs) are currently **the only STPs UL listed** for use with gasoline up to **85% ethanol (E85)** and diesel fuel with **up to 20% biodiesel (B20) or 100% biodiesel** according to UL79A and UL79B respectively.



## BUILT ON OUR STANDARD PUMPS

FE Petro™ brand Alcohol-Gas optioned submersible turbine pumps feature fuel compatibility **built on the framework of our standard models**. Replacement items like check valves and pump motor assemblies are directly interchangeable, **eliminating the need to stock duplicate items** for standard and Alcohol-Gas optioned STPs.



## STOP BIOFUEL DEBRIS

As biofuel use continues to grow, so does the potential for increased debris inside the storage tank. To **stop this debris from entering the pumping system**, use an FE Petro™ brand Intake Filter Screen (IFS). The IFS can be factory installed on STPs and Pump Motor Assemblies (PMAs) or they can be field-retrofitted onto existing FE Petro™ or competitive 4" PMAs.



## FILTRATION FOR THE ENTIRE SYSTEM

When installed, an IFS adds only about 1" to the length of the PMA and **provides filtration down to about the size of a grain of sand (0.009" openings)**. Through the IFS design, the output performance of the STP/PMA is maintained to that of a standard end bell construction while providing the **added filtration for the entire pumping system**.

# FE PETRO®

A Franklin Fueling Systems Brand

franklinfueling.com

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FFS-0362 06-14



# 1/3 & 3/4 Hp Fixed Speed Submersible Turbine Pumps

Marketers concerned about fueling times, efficiency, serviceability, reliability and overall quality find it an easy choice to specify FE Petro™ brand submersible turbine pumps (STPs). An STP has to be reliable, it has to be safe, and it has to perform. That's why thousands of station owners around the world have trusted FE Petro™ STPs and the Franklin Electric motors that drive them to keep their business flowing for over 25 years. With best-in-class flow rates and backed by a long history of dependability FE Petro™ STPs simply do their job without fail, delivering fuel to customers day after day without a hitch.

## Highlights

### Active Air Eliminator

FE Petro™ brand STPs come standard with active air elimination, which eliminates air through the highest point in the pump head at all times when the pump is running, assuring air does not pass into discharge piping.

### Safety and Ease of Maintenance

FE Petro™ brand STPs include a contractor electrical disconnect, which requires loosening only one bolt, allowing motor wiring to be disconnected without venting the dangerous tank vapors into the sump when servicing FE Petro™ submersible products.

### Simple Servicing

If ever required, the pump can be easily removed from the tank by unthreading three bolts. There is no need to disconnect the syphon system or to remove the leak detector from the system to service the STP.

### Manual Pressure Relief

As a standard FE Petro™ feature a vent screw is provided to bleed line pressure to zero when necessary. By turning this screw, product is diverted back to the tank, dropping line pressure to zero. This reduces fuel discharged into the sump manhole or dispenser pan during servicing, further protecting service technicians and the environment.

### Reliable Check Valve

The STP uses the proven FE Petro™ line check valve. At 2 3/4" in diameter, this valve reduces pressure loss at high flow rates resulting in faster fueling times. FE Petro™ line check valves are offered in multiple configurations to best suit your line leak application.

### Variable Length

The VL2 pump fits 94% of all known tank diameters and tank bury depth combinations. The VL1 and VL3 are available to handle installations shorter or longer than this range. The telescoping connection is a patented FE Petro feature. Pump length can be set by making one simple measurement and setting the pump length without affecting the UL listing.

### Outlast, Outperform with Franklin Electric Inside

FE Petro™ STPs are powered by the legendary Franklin Electric motor and built for long term performance. Franklin Electric-powered submersible pumps provide maximum uptime and a proven track record in the fueling industry that spans more than four decades. They feature best-in-class flow rates and a long history of dependability.

### Specifications

- 1/3 & 3/4 Hp fixed speed models are available in variable length and fixed length options.
- Check valve: 2 1/4" diameter fluorocarbon seal constructed with cast aluminum body and steel backing washer.
- Pressure relief valve: available in four pressure relief settings, integral to check valve. Standard model relieves at 40 psi and resets above 35 psi.
- Syphon: venturi-type syphon primer supplied with every submersible. Syphon check valve and secondary syphon sold separately.
- Air eliminator: every submersible includes a tank return path with one-way check valve to provide active air elimination.
- Electrical disconnect: electrical yoke for positive contractor disconnect during service.

### Pump Motor

- 1/3 & 3/4 Hp fixed speed, 3450 rpm, two-stage centrifugal type pump motor with integral, automatic thermal overload protection.
- 1/3 hp models have a max. pressure of 28 psi.
- 3/4 hp models have a max. pressure of 31 psi.

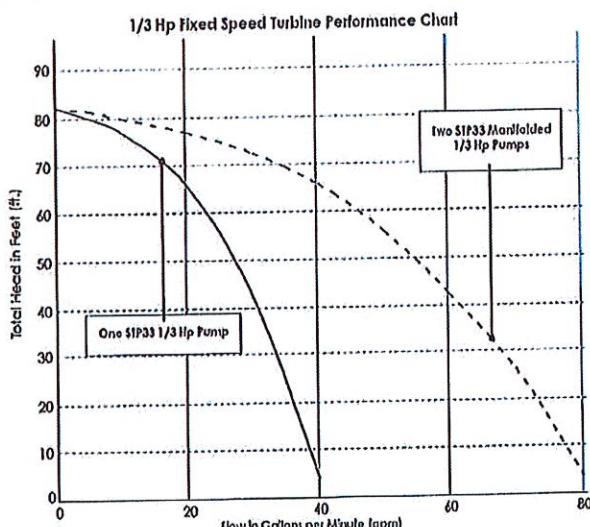
### Approvals

- cULus listed.
- Consult factory for applicable approvals.

### Quality Certification

- Franklin Fueling Systems is an ISO 9001 Certified Manufacturer.

### Performance



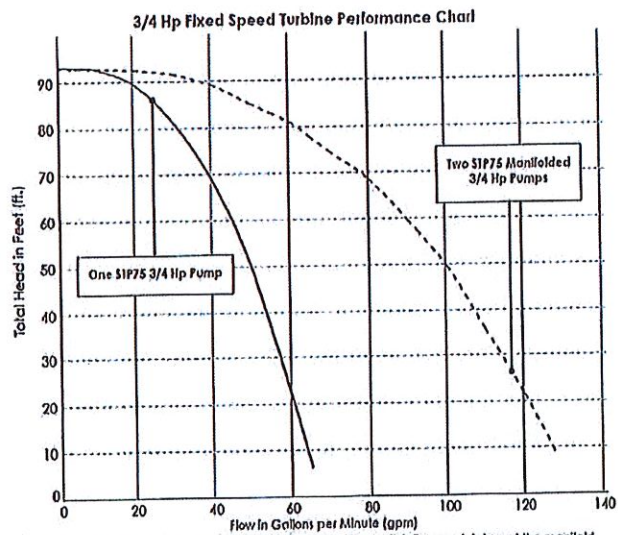
Note: Performance based on pumping solvent (0.78 specific gravity). Pressure is taken at the manifold discharge outlet. SIP33 models are powered by a single-phase, 60 Hz, 208/230 Volt power supply.

### Power Requirements

- 1/3 & 3/4 Hp fixed speed models require single-phase, 208-230 VAC, 60 Hz incoming power.
- 1/3 & 3/4 Hp fixed speed models incorporate a starting and running capacitor, with internal bleed resistor, rated 370 Volt, 15 microfarad.
- STP-SCI single-phase smart controllers and STP-CBS single-phase control boxes are available for 1/3 and 3/4 hp pump control.
- 1/3 Hp max. motor draw: 4 Amps.
- 3/4 Hp max. motor draw: 7 Amps.

### Liquid Compatibility

- Max. liquid viscosity: 70 SSU at 60 °F (15 °C).
- Standard STP models are UL and cUL listed for fuel mixtures containing up to 10% ethanol with gasoline, and 20% MTBE, 20% ETBE or 17% TAME with gasoline.
- STPAG (AG compatible) models are UL and cUL listed for fuel mixtures containing diesel fuel with up to 20% biodiesel, 100% biodiesel, up to 85% ethanol with gasoline, and 20% MTBE, 20% ETBE or 17% TAME with gasoline.
- 1/3 & 3/4 Hp fixed speed models can also be used with diesel fuels, fuel oils, kerosene, Avgas and jet fuels in a non-gelled pourable state.
- All wetted elastomers are made of a high grade, fluorocarbon compound.



Note: Performance based on pumping solvent (0.70 specific gravity). Pressure is taken at the manifold discharge outlet. SIP75 models are powered by a single-phase, 60 Hz, 208/230 Volt power supply.

## Ordering Information

A typical turbine model designation has up to five components to define the pump being supplied as follows:

**STP XXXXX Y - A - B**

**STP = Basic Model Designation**

**XXXXX = Factory Installed Options** (Model designations may include one or more of the following characters in alphabetical order.)

AG = Alcohol-gasoline compatible (up to E85, up to B20, and B100)  
(Note standard models up to 10% ethanol capable)

F = Floating suction adapter (1½" NPT female adapter)

K = Intake filter screen (IFS, factory installed to PMA)

M = MagShell™ (flow enhancing, expanded PMA shell)

\*R = Model R check valve (24 psi relief/22 psi reset for PLLD)

\*W = Model W check valve (16 psi relief/13 psi reset for PPM4000)

**Y = Pump Motor Horsepower Rating**

33 = 1/3 Hp fixed speed

75 = 3/4 Hp fixed speed

**A = Model Length** (see table)

VL1 = Variable length range #1.

VL2 = Variable length range #2.

VL3 = Variable length range #3.

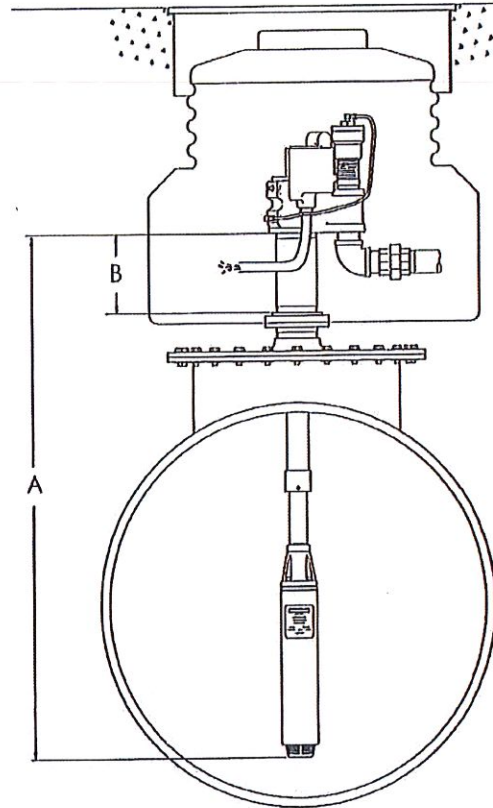
(Note VL2 models fit 94% of all known installations)

**B = Riser Pipe Length** (see diagram)

Riser pipe length is expressed as two numeric characters that indicate the total length of the riser in inches. Riser pipes are available from 7" to 69" in 1" increments (additional charge for risers 31" or longer).

**Notes:**

\*If not otherwise specified, all STP models are supplied with standard model check valve (40 psi relief /35 psi reset for MLD, TS-LS300, and TS-LS500).



**Model Length (A)**

STP Horsepower	Model Length Range	Model Length Designation
1/3 Hp	55" - 83"	VL1
	86" - 147"	VL2
	118" - 209"	VL3
3/4 Hp	57" - 86"	VL1
	88" - 149"	VL2
	120" - 212"	VL3

### Ordering Information continued

#### Standard 1/3 & 3/4 Hp Fixed Speed Submersible Turbine Pumps

Model	Description	Model Length Range/Number	Model Length Range*
STP33-VL1	1/3 Hp fixed speed	VL1	55"-83"
STP33-VL2	1/3 Hp fixed speed	VL2	86"-147"
STP33-VL3	1/3 Hp fixed speed	VL3	118"-209"
STP75-VL1	3/4 Hp fixed speed	VL1	57"-86"
STP75-VL2	3/4 Hp fixed speed	VL2	88"-149"
STP75-VL3	3/4 Hp fixed speed	VL3	120"-212"

#### Alcohol-Gas (AG) 1/3 & 3/4 Hp Fixed Speed Submersible Turbine Pumps

Model	Description	Model Length Range/Number	Model Length Range*
STPAG33-VL1	1/3 Hp AG fixed speed	VL1	55"-83"
STPAG33-VL2	1/3 Hp AG fixed speed	VL2	86"-147"
STPAG33-VL3	1/3 Hp AG fixed speed	VL3	118"-209"
STPAG75-VL1	3/4 Hp AG fixed speed	VL1	57"-86"
STPAG75-VL2	3/4 Hp AG fixed speed	VL2	88"-149"
STPAG75-VL3	3/4 Hp AG fixed speed	VL3	120"-212"

#### Notes:

1. STP models are compatible with fuel mixtures containing up to 10% ethanol with gasoline, diesel fuels, and 20% MTBE, 20% ETBE or 17% TAME with gasoline. STPAG models are compatible with fuel mixtures containing diesel fuel with up to 20% biodiesel, 100% biodiesel, up to 85% ethanol with gasoline, and 20% MTBE, 20% ETBE or 17% TAME with gasoline.
2. All models are supplied with a standard check valve unless factory option "R" or "W" is specified.
3. All above models require single-phase, 208-230 VAC, 60 Hz incoming power.
4. 4" riser pipe, if supplied locally, must be 4 1/2" OD by 3/16" WT tubing.
5. For riser pipe lengths 31" to 69", additional charges apply.

\*Model length (A) defined as the dimension from turbine manifold bottom to pump motor inlet.

#### Factory Installed Options

Specified in model number at time of STP order.

Model	Description
F	Floating suction adapter, 1 1/2" NPT female, must be factory installed
K	IFS (intake filter screen) factory assembled to pump motor assembly
R	Model R check valve, factory installed, for Veeder-Root™ PLLD Line Leak
W	Model W check valve, factory installed, for Red Jacket PPM4000 Line Leak

### Ordering Information continued

#### Field Installed Options

1/3 & 3/4 Hp fixed speed specific accessories.

Model	Description
400137908	Syphon check valve, alcohol-gasoline compatible (when ordered with STP)
400818921	STP-CBS, single-phase control box with lockout switch, 110 Volt coil
402312921	STP-DHI-SCI, combo DHI with factory wired STP-SCI (when purchased with a 4" STP)*
402312921	STP-DHI-SCI, combo DHI with factory wired STP-SCI (when purchased without a 4" STP)
402313921	STP-DHI-CBS, combo DHI with factory wired STP-CBS
402459931	Model 65 psi check valve (for slave of manifolded STPs with Veeder-Root™ PLLD)
402507930	Secondary syphon kit (when two syphon primes are required for one STP)
5800100215	STP-SCI, single-phase smart controller (when purchased without a 4" STP)
5800100215	STP-SCI, single-phase smart controller (when purchased with a 4" STP)*
5800300100	STP-DHI, dispenser hook isolation for 110 Volt dispenser handle switches, up to eight each

\*When purchasing STP-SCI or STP-DHI-SCI in equal quantities of fixed speed 4" STPs, the STP-SCI or STP-DHI-SCI will be invoiced at special discount pricing.

# FE PETRO®

A Franklin Fueling Systems Brand

franklinfueling.com

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Veeder-Root™ is a trademark of the Danaher Corporation.

May 21, 2019

Jeff Scott  
Territory Manger  
Source North America

Dear Mr. Scott,

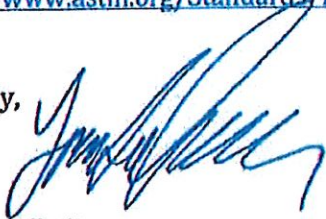
Franklin Fuelling Systems has determined that INCON series liquid level probes specifically the FMP-LL3-XXX and FMP-LL3-XXX-I to be compatible with Fuel Ethanol, also known commercially as E85, containing 51 % to 83 % ethanol by volume under UL-971, file MH25274. Our poly and fiberglass containment range are certified to meet the ASTM D5798 standard which has a provision for compatibility with high blend ethanol within the UL 2447 listing.

*Per ASTM D5798 within the scope section 1.3 This specification formerly covered Fuel Ethanol (Ed70-Ed85) for Automotive Spark-Ignition Engines, also known commercially as E85. The nomenclature "fuel ethanol" has been changed to "ethanol fuel blends" to distinguish this product from denatured fuel ethanol Specification D4806. To facilitate blending of ethanol fuel blends that meet seasonal vapor pressure requirements, a new lower minimum ethanol content has been established.*

For more information on ASTM D5798 follow the link below:

<https://www.astm.org/Standards/D5798.htm>

Sincerely,



Loren Swalheim  
Director, Global Technical Services  
Franklin Fuelling Systems




June 3, 2019

Nate Lawrence  
Lawrence Building Construction  
Ft. Wayne, IN

Dear Mr. Lawrence,

Franklin Fueling Systems has determined that INCON series liquid level probes specifically the FMP-LL3-XXX and FMP-LL3-XXX-I and associated float kits TSP-IGF4 and installation kit TSP-C4A to be compatible with Fuel Ethanol, also known commercially as E85, containing 51 % to 83 % ethanol by volume under UL-971, file MH25274.

Sincerely,



Loren Swalheim  
Director, Global Technical Services  
Franklin Fueling Systems



**Franklin Fueling Systems**

June 3, 2019

Nate Lawrence  
Lawrence Building Construction  
Ft. Wayne, IN

Dear Mr. Lawrence,

Franklin Fueling Systems has determined that INCON Series sensors specifically the FMP-ULS and FMP-EIS, FMP- EIS-U to be compatible with Fuel Ethanol, also known commercially as E85, containing 51 % to 83 % ethanol by volume under UL-971, file MH25274.

Sincerely,

Loren Swalheim  
Director, Global Technical Services  
Franklin Fueling Systems

## Pre-Operational LS500 Testing

The line stability test procedure assumes that all STP's, pump controllers, and AC inputs have been installed, wired, calibrated and are operational and in accordance with their respective installation and operation procedures. It also assumes that all T5 Series FMS console programming has been completed accurately.



**DO NOT** proceed to the Learn Process until each line successfully completes pre-operational testing. Failure to perform this test or ignoring any failed tests may prevent the FMS application from detecting a line leak.

**Note:** State and/or local laws may require a separate, more stringent manual line tightness test. Before installing the LS500, ALWAYS verify and comply with local regulations.

**Note:** The STP connected to the line being tested will need to be activated by lifting the appropriate product dispenser handle. Verify that all STP's and pump controllers are installed, calibrated and operational.

**Note:** The lines must be able to reach 20 PSI. If the lines cannot reach 20 PSI, the issue needs to be resolved or the LS500 will not work in that STP.

### **Required Equipment**

- LS500 3.0 GPH Leak Generator Kit (TSP-ALCAL)
- Needle Valve Kit (TS-ALNIP)
- Pressure gauge
- Approved safety container

---

### **ATTENTION**

The Needle Valve Kit (TS-ALNIP) included with this kit is NOT compatible with E85 and other fuels containing high levels of Ethanol / Alcohol.

For E85 and other high Ethanol / Alcohol mixture applications the Alternative Fuels Needle Valve Kit (TS-AFALNIP) should be ordered separately.

All other regularly wetted components are E85 compatible.

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# Franklin Fueling Systems

May 4, 2018

Subject: Franklin Fueling Overfill Prevention Valve (OPV) and Spill Prevention Equipment Fuel Compatibility

To Whom It May Concern,

This letter affirms that the materials used by Franklin Fueling Systems in the construction of the Overfill Prevention Valve (OPV) and Spill Prevention Equipment listed herein, as of the date of this letter, is compatible with the following fuels as defined by ASTM:

### Group 1

- Gasoline (E0 to E10)
- Diesel (B0 to B5)
- Heating Fuels (Kerosene, Fuel Oil)

### Group 2

- Mid-level Ethanol Fuel Blends (E11 to E50)
- Ethanol Fuel Blends (E51 to E83\*)

\*Commercially known as E85

### Group 3

- Biodiesel Blends (B5 to B20) and Biodiesel (B100)

### Group 4

- Aviation Fuels (AvGas, Jet Fuel)

### Overfill Prevention Valves

Model Numbers		Groups
708591901, 708591902, 708592901, 708592902, 708593901, 708593902	Defender Series™ OPVs with standard drop tubes	1
708591921, 708591922, 708592921, 708592922, 708593923, 708593924, 708594901, 708594902	Defender Series™ OPVs, AGB	1, 2, 3, 4
708226901	Defender Series™ Remote fill splice kit	1, 2, 3, 4



# Franklin Fueling Systems

## Spill Containment

Model Numbers		Groups
702xxxxx, 705xxxxx, 715xxxxx	EBW Series Direct Bury Spill Containers	1
705545xxx, 705555xxx, 705556xxx	Defender Series™ Direct Bury Spill Containers	1, 2, 3, 4
DMP36xxxxxx, DMP42xxxxxx	Defender Series™ Multiports	1, 2, 3, 4
SWF-100-SS, SWV-101-SS	Stainless Steel Swivel Adapters	1, 2, 3**, 4
77720102	4" Top Seal Fill Cap	1, 2, 3
30430103, 30430104	4" Vapor Recovery Cap	1, 2, 3

\*\*B100 not determined on this equipment

Please let me know if there are any other questions of concerns regarding Franklin Fueling Overfill Prevention Valve (OPV) and Spill Prevention Equipment Fuel Compatibility.

Regards,

Nicole Keppy  
Franklin Fueling Systems  
Product Manager, Service Station Hardware

# DEFENDER SERIES® OVERFILL PREVENTION VALVE

The Defender Series® Overfill Prevention Valve (OPV) prevents the overfill of an underground storage tank during a gravity-fed product delivery. It employs a revolutionary magnetically-coupled actuator system to provide positive shutoff. This unique method of shutoff eliminates any penetrations in the valve, making it both vapor and leak tight. This also allows for remote compliance testing of the primary functionality at grade level without having to remove the OPV from the tank.



Drop Tube  
Adapter

## HIGHLIGHTS

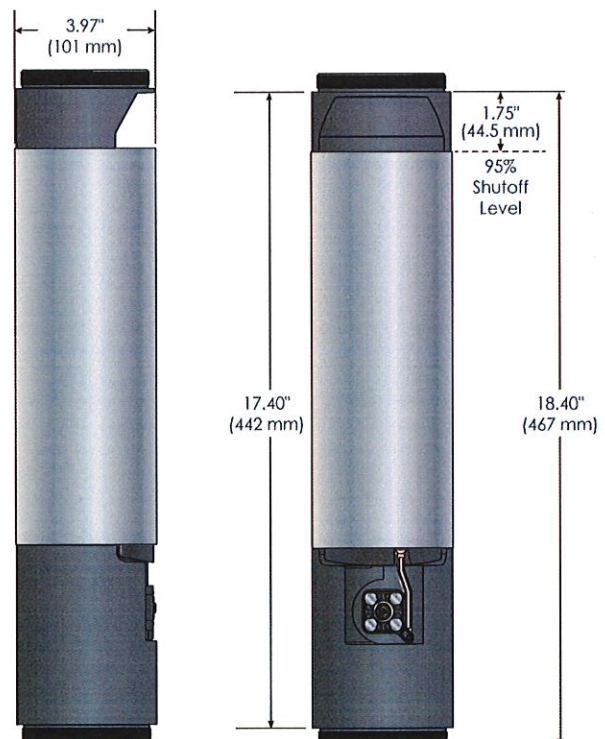
- Magnetic coupler actuates the interior primary flapper assembly and secondary shut-off valve when the float rises outside of the valve, eliminating valve body penetrations and any potential product or vapor leak points.
- After cutting to length in the field, the upper drop tube is roll-crimped onto a top adapter outfitted with two O-rings and then threaded onto the top of the valve body, eliminating the need for drilling, rivets, epoxy, and flaring tools.
- Bottom drop tube is cut in the field and threaded onto the bottom of the valve ensuring straight installation.
- The roll-crimp/thread method of installing drop tubes ensures proper alignment of the drop tubes with the rest of the OPV assembly, making installation and removal of the entire assembly smooth.
- Damaged drop tubes can be easily replaced instead of having to purchase an entire new assembly.
- Fully compatible with gas, gas/alcohol blends, diesel, and Biodiesel.
- Compatible with industry standard 4" drop tubes allowing retrofit into existing installations.
- The entire OPV assembly remains within the 4" inner diameter of the riser preventing interference with other tank components and also allowing removal even while the tank is full.
- Actuates in both low- and high-flow applications and functions within a broad range of flow rates from 25 gpm to 370 gpm (95 lpm to 1,400 lpm) and higher.
- The remote testing tool allows for remote testing of the primary functionality without having to remove the OPV from the riser.

## SPECIFICATIONS

### Approvals & Certifications

- UL 2583 listed and ULc listed, MH21090.
- CARB certified, VR-101 (FFS) and VR-102 (OPW®).
- ATEX 2014/34/EU approved.
- EN13616 certified.
- KIWA BRL-K636/03 certified.

### Dimensions



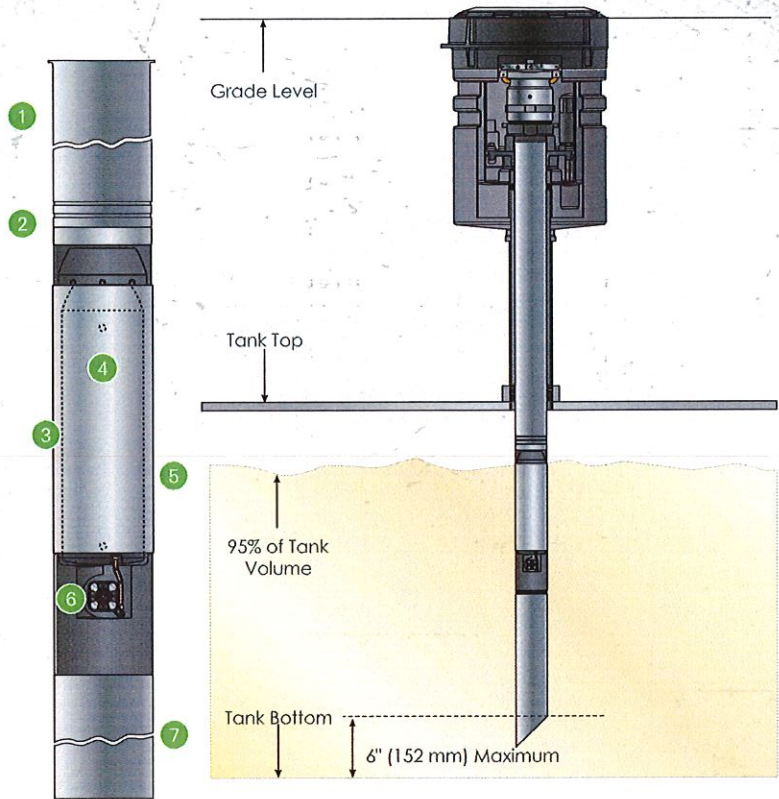
# SPECIFICATIONS CONTINUED

## Components

- 1 Pre-flanged aluminum top drop tube
- 2 Roll-crimped top fitting/drop tube
- 3 Protective float sleeve
- 4 Float (shielded by float sleeve)
- 5 Valve assembly
- 6 Magnetically-coupled actuator
- 7 Threaded bottom drop tube

## Operation

As the liquid level in the UST approaches 95% capacity, the liquid level raises the float. As the float rises it actuates the external/internal magnetic couplers which release the flapper to be closed by the flow of product. As the float continues to rise, the internal mechanism pushes the flapper further into the product flow to allow actuation at high or low flow rates. This sudden reduction in flow caused by the primary flapper closing creates "line shock" to the fill hose which signals the delivery driver that the tank is nearing 95% capacity. As the float continues to rise to the 95% fill level, the secondary closes, completely stopping the flow of fuel.



## ORDERING INFORMATION

Model	Description
708691901	Defender Series® overfill prevention valve with 5' (1524 mm) top drop tube, 8' (2438 mm) bottom drop tube
708691902	Defender Series® overfill prevention valve with 5' (1524 mm) top drop tube, 10' (3048 mm) bottom drop tube
708691921	Defender Series® overfill prevention valve with 5' (1524 mm) top drop tube, 8' (2438 mm) bottom drop tube, AGB compatible*
708691922	Defender Series® overfill prevention valve with 5' (1524 mm) top drop tube, 10' (3048 mm) bottom drop tube, AGB compatible*
708692901	Defender Series® overfill prevention valve with 10' (3048 mm) top drop tube, 8' (2438 mm) bottom drop tube
708692902	Defender Series® overfill prevention valve with 10' (3048 mm) top drop tube, 10' (3048 mm) bottom drop tube
708692921	Defender Series® overfill prevention valve with 10' (3048 mm) top drop tube, 8' (2438 mm) bottom drop tube, AGB compatible*
708692922	Defender Series® overfill prevention valve with 10' (3048 mm) top drop tube, 10' (3048 mm) bottom drop tube, AGB compatible*
708693901	Defender Series® overfill prevention valve, coaxial with 6.5' (1981 mm) top drop tube, 8' (2438 mm) bottom drop tube
708693902	Defender Series® overfill prevention valve, coaxial with 6.5' (1981 mm) top drop tube, 10' (3048 mm) bottom drop tube
708693923	Defender Series® overfill prevention valve, poppeted coaxial with 6.5' (1981 mm) top drop tube, 8' (2438 mm) bottom drop tube, AGB compatible*
708693924	Defender Series® overfill prevention valve, poppeted coaxial with 6.5' (1981 mm) top drop tube, 10' (3048 mm) bottom drop tube, AGB compatible*
708694901	Defender Series® overfill prevention valve only with top adapter, AGB compatible*
708694902	Defender Series® overfill prevention valve only with coaxial top adapter, AGB compatible*
708535901	Roll crimping tool
708530930	Replacement roll crimper tool roller bit for retrofit with existing tool
708534901	Remote testing tool, 11' (3353 mm) long sectional/collapsible
708534902	Coaxial remote testing tool, 11' (3353 mm) long sectional/collapsible

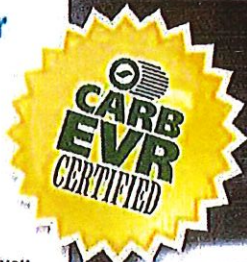
\*Alcohol, gas, biofuel compatible (E-85, gasoline and Biodiesel) models come with hard coated anodized drop tubes for full compatibility.

## Replacement Parts

Model	Description
85039-DT	Spare drop tube seal
1103942	Spare adapter O-ring
1103943	Spare Coaxial adapter O-ring
708526901	Upper tube adapter kit
708529901	Coaxial Upper tube adapter kit

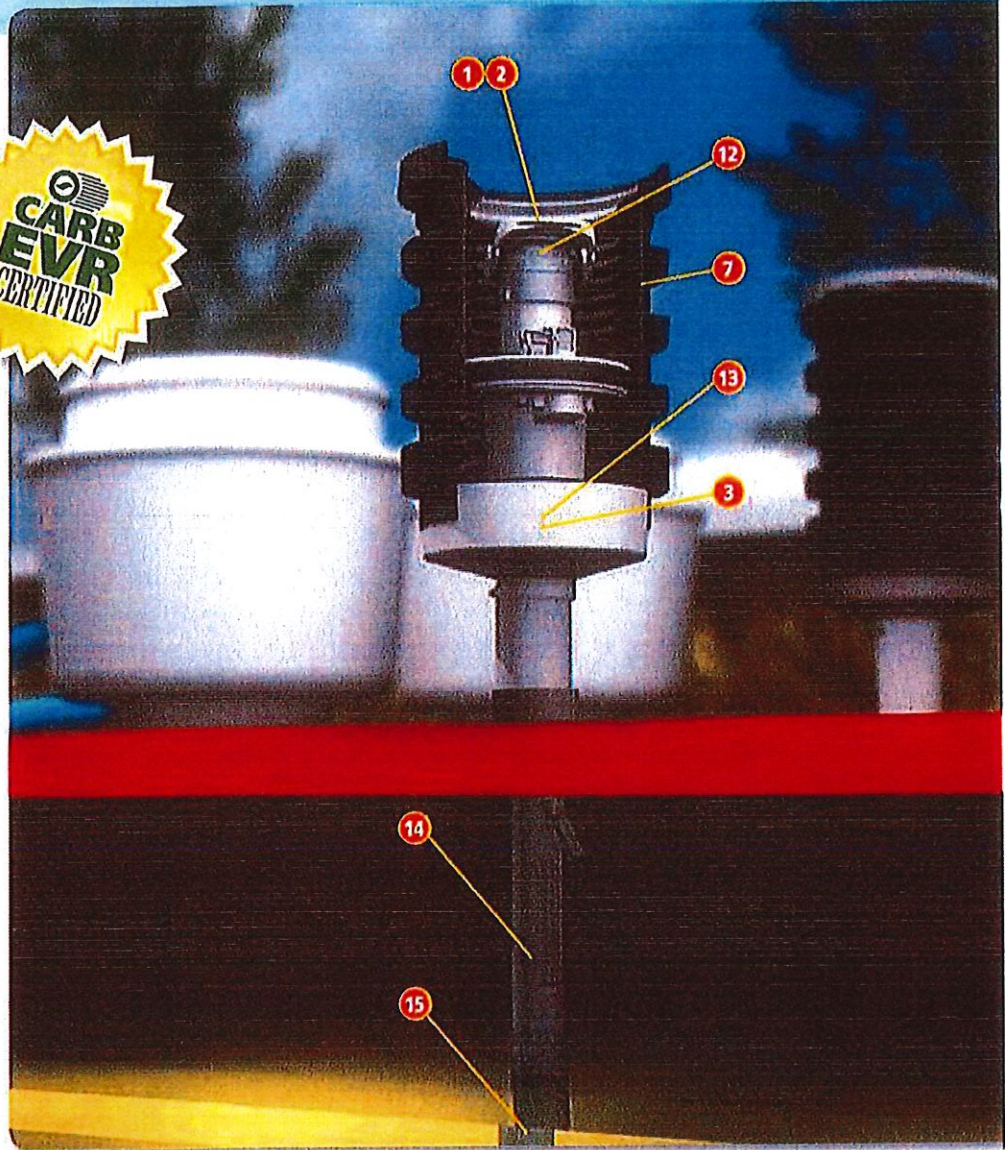
Model	Description
70821705	5' flanged top drop tube; order in multiples of 4
70821725	5' flanged top drop tube, AGB compatible; order in multiples of 4
708542908	8' thread-on bottom drop tube assembly, 2-pk
708542908AN	8' thread-on bottom drop tube assembly, 2-pk, AGB compatible
708542910	10' thread-on bottom drop tube assembly, 2-pk
708542910AN	10' thread-on bottom drop tube assembly, 2-pk, AGB compatible

## Welcome to our Extended Line of CARB EVR Approved E85 UST Products



If you're handling E85, it's time you get to know the entire line up of OPW CARB EVR Approved E85 UST Equipment. From our 2100 and EDGE Series spill containers to our Innovative NEW 7150M Overfill Prevention Valve, you can count on legendary OPW quality and performance to make sure you're covered!

Regardless of whether or not you are in a CARB EVR required area for E85, you can rest assured that OPW UST E85 products meet the most stringent EPA regulations for spill containment and vapor tight integrity so you are doing all you can do to help keep the air pure and the water clean at your site.



- 

**1 634TT-EVR Fill Cap**


  - Heavy duty and corrosion resistant Duratuff® body eliminates rust and oxidation for a long, maintenance-free life
- 

**2 634LPC Low Profile Top-Seal Fill Cap**


  - Designed for tight installations where the clearance between the top of the fill adaptor and the underside of the spill container cover is limited
  - Rugged iron lever provides a positive cam-action that seats the cap firmly in the adaptor groove for a water and vapor-tight seal
- 

**3 FSA-400 Face Seal Adaptor**


  - Provides a flat, true sealing surface on threaded pipes where a gasket seal exists per EVR requirements.
  - Installs on fill pipe riser below the spill container to provide a true sealing surface for the drop tube flange on the overfill prevention valves

- 

**4 1711T-EVR Vapor Recovery Caps**

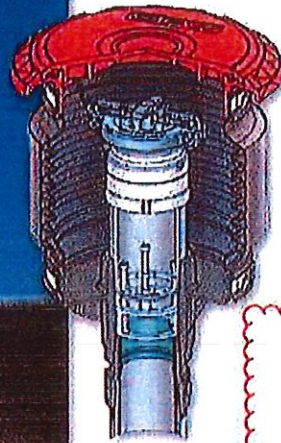
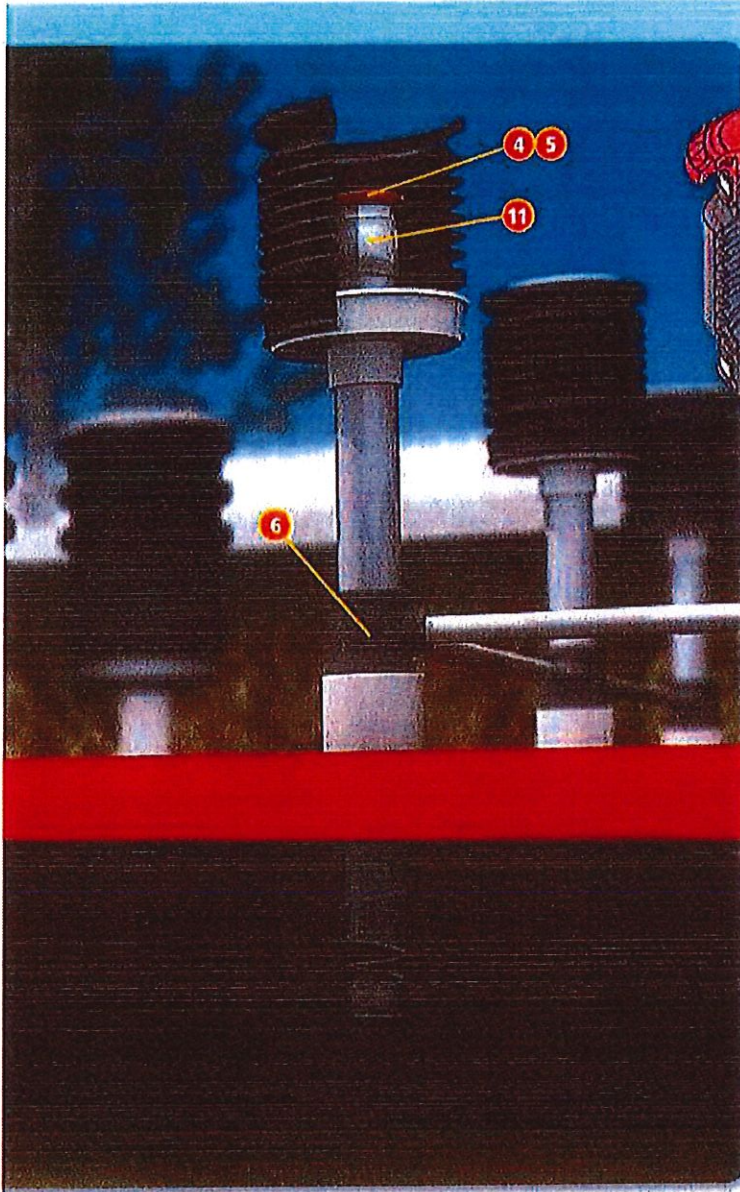
  - Installs on the vapor recovery adaptor, when not in use, to prevent vapors from escaping and to prevent water, dust and debris from entering the tank
  - Constructed of Duratuff® to help prevent corrosion
- 

**5 OPW 1711LPC Low Profile Top Seal Vapor Cap**

  - Designed for tight installations where the clearance between the top of the vapor adaptor and the underside of the spill container or manhole cover is limited
  - Rugged iron lever provides a positive cam-action that seats the cap firmly in the adaptor groove for a water and vapor-tight seal
- 

**6 233 Series Extractor Fitting**

  - Designed for use with all OPW 53VML Ball Float Vent Valves that include an extractor cage



**NEW 61VSA-MA Vapor Recovery Swivel Adaptor**



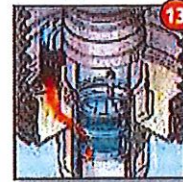
- Nickel Coated Brass construction for durability, consistent swivel torque, and reliable vapor tight sealing

**NEW 61SALP-MA Fill Swivel Adaptor**



- Nickel Coated Brass construction for durability, consistent swivel torque and reliable vapor tight sealing

**NEW 71JSK-4RMT: Remote Fueling Jack Screw Kit**



- Nickel Plated Aluminum
- Works in conjunction with our 7150M for remote fueling applications

**NEW 71JSK-44MA Jack Screw Kit**

- Plated Aluminum Construction
- Includes cages for both cast iron and composite base spill containers

**NEW 7150M-412C Overflow Prevention Valve**

- Constructed of nickel plated aluminum, anodized aluminum, stainless steel and other compatible materials; no exposed bare aluminum
- Stainless steel lower tube included, no epoxy needed in field
- Designed for tanks up to 10 ft bury and 10 ft in diameter
- Robustly designed for long term vapor-tight performance in aggressive fuels



**7 EDGE Series EVR Spill Containers**

- OPW EDGE™ Double Wall Spill Containers install in the same space as single wall buckets
- Delivers best-in-class features that significantly improve reliability, installation, testing and serviceability-ease.



**8 1-2100 EVR Series Spill Containers**

- Designed to prevent spilled product from entering the soil near the fill and vapor return riser connection
- Help prevent soil contamination and groundwater pollution



**9 500 Series (511 / 521) EVR Multiport**

- Features flush-mounted manhole lid and raised dual dam and groove spill container ring with P511-EVR Buckets using OPW 1-2100 Style Thread-On Spill Containers
- All Fill Ports in these spill containers feature an enhanced 1DK-2100-EVR vapor tight drain valve
- Available in Composite or Cast Iron bases with 5-gallon buckets



**NEW 61T-SS-0412: 4" by 12 ft Drop Tube**

- Stainless Steel Construction, 12 ft Length

**NEW 61T-SS-0417: 4" by 17 ft Drop Tube**

- Stainless Steel Construction, 17 ft Length



**NEW 62M-MA: Monitoring Cap**

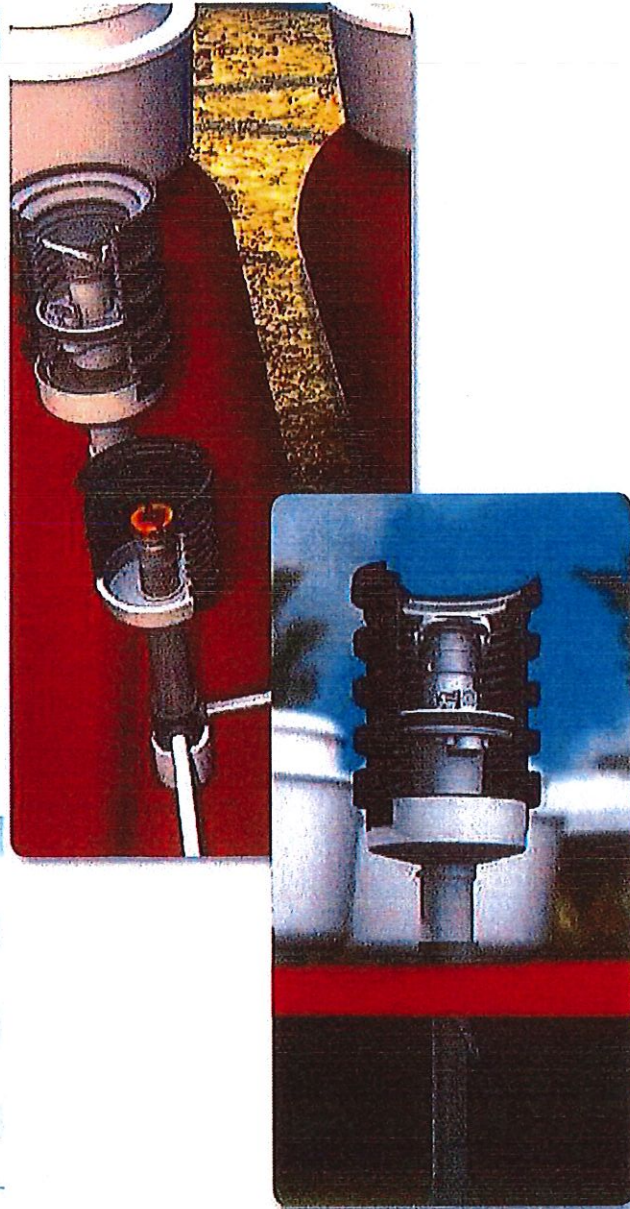
- Anodized aluminum construction
- Includes 3/8" Pipe Plug and 3/8" Grommet Fitting
- Compatible with 1/2" Grommet (sold separately)



OPW is committed to the long-term sustainability of our world. Every product we build is about enabling operators to provide a safer, cleaner, greener environment for themselves and their customers. Our CARB EVR Approved E85 UST products are an example of this commitment. Whether or not you are in a region required to comply with CARB regulations, you can rest assured, your OPW products are helping you keep your environment clean.

### Ordering Specifications - Product Side

Product No.	Description
71SOM-412C	Vapor Tight Overfill Prevention Valve for Alcohol
71SO-T00LCT	71SO Installation Tool
71JSK-4RMT	Remote Fueling Jack Screw Kit E85 EVR Approved
71JSK-44MA	Jack Screw Kit for Cast Iron Base Spill Buckets E85 EVR Approved
634TT-7085-EVR	Top Seal Fuel Cap E85 EVR Approved
634LPC-0400	Low Profile Fill Cap E85 EVR Approved
61SALP-MA	Fill Swivel Adapter E85 EVR Approved
61T-SS-0412	4" by 12 ft Drop Tube E85 EVR Approved
61T-SS-0417	4" by 17 ft Drop Tube E85 EVR Approved
FSA-400-S	Face Seal Adaptor E85 EVR Approved
233 Series	Extractor Fittings E85 EVR Approved
EVR EDGE Series	Spill Container E85 EVR Approved
EVR 2100 Series	Spill Container E85 EVR Approved
EVR 6511/6521 Series	Multiport with 1 Series Thread on Spill Containers E85 EVR Approved



### Ordering Specifications - Vapor Side

Product No.	Description
1711T-7085-EVR	Top Seal Vapor Cap E85 EVR Approved
1711LPC-0300	Low Profile Vapor Cap E85 EVR Approved
61VSA-MA	Vapor Recovery Swivel Adaptor E85 EVR Approved
62M-MA	Monitoring Cap E85 EVR Approved
EVR EDGE Series	Spill Container E85 EVR Approved
EVR 2100 Series	Spill Container E85 EVR Approved
EVR 6511/6521 Series	Multiport with 1 Series Thread on Spill Containers E85 EVR Approved



RETAIL FUELING

A DODGE COMPANY

www.opwglobal.com

9393 Princeton-Glendale Road • Hamilton, Ohio USA 45011 • Phone: (800) 422-2525 • Fax: (800) 421-3297

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## Below Ground Products Fuel Compatibility Matrix

Updated 12/2018

OPW FCS Products	Description	Standard Fuels: ≤15% Ethanol Gasolines 5% Bio-Diesel*	High Ethanol Content Gasoline: 15-100% Ethanol	High Biodiesel Content 5-20% Biodiesel*	High Biodiesel Content 5-100% Biodiesel*	Av-Gas/ Jet Fuel	Kerosene/ Fuel Oil	DEF (Diesel Exhaust Fluid)
CXXA Double Wall Piping	Double Wall Primary Piping	X	X	X	X	X	X	X
DPC Series	Double Wall Pipe Couplings	X	X	X	X	X	X	
SPC Series	Single Wall Pipe Coupling	X	X	X	X	X	X	
SBC Series	Stainless Steel Swivel Bolt On Coupling	X	X	X	X	X	X	X
SMA-1515, SMA-1520, SMA-2020, SMA-3030	E-Coated Male Adaptors	X	X	X	X	X	X	
SMA-7575, SMA-1010	Swivel Male Adaptor (Brass or Zinc Plated)	X					X	
STF-1515, STF-2020, STF-2215, STF-2020	E-Coated Swivel Tees	X	X	X	X	X	X	
SFA-7575, SFA-1010	Swivel Female Adaptor (Brass or Zinc Plated)	X					X	
SEF-1515, SRE-2015, SEF-2020, SEF-3030	E-Coated Swivel Elbows	X	X	X	X	X	X	
Polyethylene and Fiberglass Sumps	Dispenser, Tank, Loop, and Transition Sumps	X	X	X	X	X	X	X
REF Series Entry Fittings	Entry Fittings	X	X	X	X	X	X	X
DEB and EBF Series	Entry Boots	X	X	X	X	X	X	X
1-2100 Series / Multiports / 1-2200 Series	Spill Containers	X	X	X	X	X	X	***
FibreTite Multiports	Spill Containers	X	X	X	X	X	X	***
101BG-Series	Spill Containers	X	X	X	X	X	X	***
1-3100 Series (Edge)	Double Wall & Single Wall Spill Container Series	X	X	X	X	X	X	***
60V Series	Vapor Line Shear Valve	X	X	X	X	X	X	
10 Series	Emergency Shut Off Valve	X	X	X	X	X	X	
<b>10 Plus Series</b>	<b>Emergency Shut Off Valve</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	
60V-DEF	DEF Series Shear Valve							X
<b>61SALP Series</b>	<b>Fill Swivel Adaptor</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	
633T-8076	Fill Adaptor	X	X	X	X	X	X	
61VSA Series	Vapor Swivel Adaptor	X	X	X	X	X	X	
1611AVB-1625	Vapor Adaptor	X	X	X	X	X	X	
634TT-7085-EVR	Fill Cap	X	X	X	X	X	X	
1711T-7085-EVR	Vapor Cap	X	X	X	X	X	X	
634LPC-040	Low Profile Fill Cap	X	X	X	X	X	X	
<b>1711LPC-0300</b>	<b>Low Profile Vapor Cap</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	
62M Series	Monitoring Probe Cap	X	X	X	X	X	X	X
61SO & 71SO Series	Overfill Valve	X				X	X	
61SOM Series	Overfill Valve Anodized	X	X			X	X	
71SO-B Series	High BioDiesel Overfill Valve	X		X	X	X	X	
6111 & 61TP Series	Tank Bottom Protectors	X				X	X	
61T Series	Drop Tubes	X				X	X	
61T-SS Series	Stainless Steel Drop Tube	X	X	X	X	X	X	
61T-DEF Series	Stainless Steel DEF Drop Tube							X
233 Series	Extractor Valve	X	X	X	X	X	X	X
FCXX Series	Stainless Flex Connectors	X	X	X	X	X	X	X
53VML/30MV Series	Ball Floats	X	X	X	X	X	X	
523V Series	Pressure Vacuum Vent	X	X	X	X	X	X	X
623V Series	Pressure Vacuum Vent	X	X	X	X	X	X	X
723V Series	EVR Pressure Vacuum Vent	X	X	X	X	X	X	X

\* Bio-Diesel must meet ASTM Standard for fuel quality to maintain compatibility with products above  
 \*\*\* Drain plug versions compatible with DEF if installed with Stainless Steel Drop Tube between Nipple and Fill Adaptor  
 ≤ Refers to less than or equal to the fuel standard rating for percentage of content

# GASOILA<sup>®</sup> E-Seal

**GASOILA<sup>®</sup>**  
CHEMICALS

## 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

# GasOila Quick and Easy Sealant Reference Guide

## Soft-Set



- General Purpose, Top-selling Sealant
- Perfect for New Pipes
- Stays Pliable in Cold Temperatures
- Non-Hardening
- Non-Separating
- Non-Toxic

### TYPE

### APPLICATIONS

### USED BY

### USED ON

### APPROVALS

Blue Gray Paste with PTFE

Water, Steam, Natural Gas, LPG, Propane, Gasoline, Dulane  
\*Not for Use with Oxygen systems

- Mechanical Contractors
- Plumbers
- Gas Utilities
- Service Station Installers
- Manufacturing Plants

All Metals and Most Plastics

GSA, UL NSF 61 NSF 14

## E-Seal



- Specifically for E10 and E85
- Stays Pliable in Cold Temperatures
- Non-Hardening
- Non-Separating
- Non-Toxic

Green Paste with PTFE

Ethanol Blended Gasoline, Including E10 and E85 (NOT 100% Ethanol applications)  
\*Not for Use with Oxygen systems

- Gas Station Installers

All Metals

UL

## Hard-Set



- Hard Setting Sealant
- Assembles Threaded Joints Permanently
- Excellent for Coaling Surfaces
- Impervious to Gasoline
- Flammable

Red Vermish

Aliphatic, Aromatic and Chlorinated Solvents  
\*Not for Use with Oxygen systems

- Auto Industry to Seal Drive Trains, Coat parts
- Contractors Installing Underground Piping, Steam Systems
- Marine Manufacturers

All Metals, Rubber, Porcelain, Wood

UL

## PLS-2



- Ideal for Demanding Pneumatic and LPG Applications

Gray Paste with PTFE

Chlorine, Diesel, Jet Fuel, Steam, Dilute Acid, LPG  
\*Not for Use with Oxygen systems

- Chemical Plants
- Gas Utilities
- Refineries
- Airlines, Hydraulics
- Tank Trucks

All Metals and Most Plastics

GSA UL

## 100



- Ideal for use on Systems with 100% Methanol, Ethanol, Alcohol and Highly Corrosive Chemicals
- Soft Setting

Black Paste

High Concentrations of Alcohol, Solvents, Caustic Chemicals  
100% Ethanol  
100% Methanol  
\*Not for Use with Oxygen systems

- Pharmaceutical
- Chemical Companies

All Metals and Fiberglass

- \*Not for Use on Plastic Pipe
- \*Threads must be Clean Prior to use

## JC-30



- For Damaged, Irregular, Mis-cut and Straight Threads
- Vegetable Oil Base
- Thick Consistency, 10-15% more Solids than Conventional Sealants

Oyster White Paste with PTFE

Water, Steam, Natural Gas, LPG, Propane, Gasoline, Freon 22 and Hydraulic Fluids  
\*Not for Use with Oxygen systems

- Plumbers
- Gas Utilities
- Manufacturing Plants

All Metals

## NT



- Soft Setting for Applications Requiring Grit-Free, Non-PTFE Compound
- No Fillers to Contaminate Gas Lines
- For use when Non-PTFE Sealant is Preferred

Dark Blue Paste without PTFE

Water, Steam, LPG, Propane, Gasoline  
\*Not for Use with Oxygen systems

- Propane Companies
- Petroleum Companies

All Metals and Most Plastics

NSF 61 NSF 14

## FasSeal ATS

- Anaerobic Thread Sealant that cures in Absence of Oxygen • Ideal for Refrigeration or other High Vibration Applications • High Speed Curing Time • Vibration Resistant

Smooth White Paste with PTFE

Air Conditioning Lines, Hydraulic-Pneumatic Lines, Air Compressor Hoses, Sprinkler Installations  
\*Not for Use with Oxygen systems

- HVAC
- Refrigeration Companies

Metals  
\*Not for Use on Plastic Pipe

UL

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