



# Ethanol

Manufacturer's Affirmative Statement of Compatibility  
(As required by California Code of Regulations section 2631(k))

Manufacturer: Modern Welding Company of California, Inc.  
Corporate: **Modern Welding Company of California, Inc.**  
Headquarters **4141 N. Brawley Avenue**  
Address: **Fresno, CA 93722**  
Phone: 559-275-9353  
Email: [bbartlett@modweldco.com](mailto:bbartlett@modweldco.com)

I declare, to the best of my knowledge and belief, that this affirmative statement of compatibility and the information contained herein is true, correct, and complete.

Robert Bartlett

Vice President / Plant Manager

Print Name

Title

  
Manufacturer's Authorized Signature

5/22/12

Date

PRINT TIME MAR. 27. 1:16PM

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333 Pfingsten Road  
Northbrook, Illinois 60062-2096  
(708) 272-8800  
FAX No. (708) 272-8129  
MCI Mail No. 254-3343  
Telex No. 6502543343



March 27, 1996 .

Modern Welding Company, Inc.  
Mr. Stephen L. Fort  
Box 1450  
Owensboro, KY 42302-1450

Our Reference: MH3217

Subject: UL 58 and UL 1746 Listings

Dear Steve:

This responds to your March 27, 1996 fax.

Modern Welding Company has the following UL 58 and 1746 Listed tank constructions:

**UL58:**            Underground Tanks for Flammable Liquids,  
                      Type I Secondary Containment Underground Tanks.  
                      Type II Secondary Containment Underground Tanks.

**UL1746:**        Composite Underground Tank For Flammable Liquids  
                      Type I Secondary Containment Composite Underground Tank for Flammable  
                      Liquids.  
                      Type II Secondary Containment Composite Underground Tank for Flammable  
                      Liquids.  
                      Jacketed Underground Tank for Flammable Liquids.

Modern has actively participated in building these tank constructions for many years. For example, Modern's UL58 Listing for "Underground Tanks for Flammable Liquids" was established on May 31, 1962. Modern's UL1746 Listing for "Composite Underground Tank for Flammable Liquids" was established on May 28, 1990.

These tanks are intended for installation and use in accordance with the Flammable and Combustible Liquids Code, NFPA 30 and the Standard for the Installation of Oil-Burning Equipment, NFPA 31.

A not-for-profit organization  
dedicated to public safety and  
committed to quality service

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If you have any questions on this information, please feel free to contact me.

Sincerely,



LISA DEVERA (Ext.43241)  
Associate Project Engineer  
Engineering Services, 416B

Reviewed by:



THOMAS SKOWERA (Ext. 42086)  
Engineering Group Leader  
Engineering Services, 416B

The UL report



Modern Welding Company of California, Inc.  
4141 N. Brawley Ave  
Fresno, CA 93722  
Fabricators of Metal Products  
559-275-9353; Fax: 559-275-4381

January, 2009

Re: Steel tanks are compatible with ethanol and bio-diesel blended fuels.

To Whom It May Concern:

Modern Welding Company of California, Inc. position on the compatibility of steel aboveground and underground tanks for the storage of ethanol blended fuels (E-10; E-85; or E-100) and bio-diesel blended fuels including ultra low sulfur diesel fuels (B-5, B-10, B-20 or B-100) are as follows.

Modern Welding Company of California, Inc. acknowledges that fuels stored in our aboveground and underground storage tanks should meet the requirements of national quality standards as published by ASTM, The American Society of Testing and Materials.

A few examples are listed below:

- ASTM D6751-08, Standard Specification for Biodiesel Fuel Blend Stock (B100) for Middle Distillate Fuels (EPA Requirement)
- ASTM D5798, Standard Specification for Fuel Ethanol for Spark Ignition Engines
- ASTM D4806, Standard Specification for Denatured Fuel Ethanol for Blending with Gasoline for Use as Automotive Spark Ignition Engine Fuel
- ASTM D7467, Specification for Diesel Fuel Oil Biodiesel Blend (B6 to B20)
- ASTM D975-08a, Specifications for Diesel Fuel Oils
- ASTM D396-08b, Specifications for Fuel Oils

Modern Welding Company of California, Inc. recognizes the publications issued by the Department of Energy's National Renewable Energy Laboratory and the Office of Scientific and Technical Information, the National Biodiesel Board and the Renewable Fuels Association concerning the storage of ethanol and bio-diesel blended fuels which indicate that steel aboveground or underground tank installations are serviceable for such purpose. Aboveground steel tanks should be secondarily contained and manufactured from low-carbon steel as referenced in the Underwriters Laboratories UL-142 construction standard. Underground steel tanks should be secondarily contained and manufactured from low-carbon steel as referenced in the Underwriters Laboratories UL-58 and UL-1746 standards.

The 2006 International Fire Code, section 3404.2.7, references NFPA 30 for tank design and construction of flammable and combustible liquid storage tanks. The NFPA 30, 2008 edition, section 21.4.1, requires steel tanks use for the storage of all Class I and Class II liquids.

#### Ethanol Reference

US Department of Energy  
Energy Efficiency and Renewable Energy  
National Renewable Energy Laboratory  
[www.eere.energy.gov](http://www.eere.energy.gov)  
Phone: 877-337-3463  
<http://www.afdc.energy.gov/afdc/pdfs/41853.pdf>

### Ethanol Reference

Renewable Fuels Association  
One Massachusetts Ave. NW, Suite 820  
Washington DC 20001  
Phone: (202) 289-3835  
Fax: (202) 289-7519  
Email: [info@ethanolrfa.org](mailto:info@ethanolrfa.org)  
Website: [www.ethanolrfa.org](http://www.ethanolrfa.org)  
<http://www.ethanolrfa.org/objects/pdf/newRFA%20Fuel%20Ethanol%20960501.pdf>

### Biodiesel Reference

U.S. Department of Energy  
Office of Scientific and Technical Information  
P.O. Box 62  
Oak Ridge, TN 37831-0062  
Phone: 865.576.8401  
Fax: 865.576.5728  
<http://www.nrel.gov/docs/fy08osti/43672.pdf>

National Biodiesel Board Main Office  
605 Clark Ave  
P.O. Box 104898  
Jefferson City, Missouri 65110  
PHONE: (573) 635-3893  
Toll Free: 1-800-841-5849  
FAX: (573) 635-7913  
[info@biodiesel.org](mailto:info@biodiesel.org)  
<http://www.nrel.gov/docs/fy08osti/43672.pdf>  
[www.biodiesel.org](http://www.biodiesel.org)

Steel Tank Institute  
944 Donata Ct.  
Lake Zurich, IL 60047  
Phone: 847-438-8265  
Fax: 847-438-8766  
<http://www.steeltank.com/Portals/0/PressReleases/04.08-BIODIESEL-STEEL-COMPATIBILITY.pdf>  
<https://www.steeltank.com/LinkClick.aspx?fileticket=DmVUhxGwDVE%3d&tabid=108&mid=502>

### Inspection and Maintenance Programs

It is important that owners implement a maintenance program for all tanks and associated equipment, including monitoring and removing any water that may accumulate within the tank system. Additionally, tanks owners should consider cleaning existing tanks prior to introducing bio-fuels. Bio-fuels "clean fuels" deteriorate, test outside the parameters of ASTM standards, at much faster rates than traditional crude oil based fuels. Therefore, owners and operators must remain diligent in monitoring fuel quality to protect their customers from "out of spec" fuels that in some cases may exceed maximum fuel storage life. Recommended practices for inspection and maintenance can be obtained from the following sources and those listed earlier:

Petroleum Equipment Institute  
P.O. Box 2380  
Tulsa, OK 74101  
918-494-9696  
RP-900-08, "Recommended Practices for the Inspection and Maintenance of UST Systems"  
RP-500-05, "Recommended Practices for the Inspection and Maintenance of Motor Fuel Dispensing Equipment"

## Inspection and Maintenance Programs

Steel Tank Institute

944 Donata Ct.

Lake Zurich, IL 60047

Phone: 847-438-8265

Fax: 847-438-8766

STI-SP001, Standard for Inspection of Aboveground Storage Tanks

Keeping Water Out of Your Storage System:

[https://www.steeltank.com/Portals/0/pubs/KeepingWaterOutofYourStorageSystem\\_updated%202.pdf](https://www.steeltank.com/Portals/0/pubs/KeepingWaterOutofYourStorageSystem_updated%202.pdf)

[www.steeltank.com](http://www.steeltank.com)

### Underwriters Laboratories position on ethanol and biodiesel fuels.

#### Ethanol

Underwriters Laboratories has published the following statements with regards to E-85 fuels, "UL does not offer a specific certification program that covers E85 for steel, cathodic, composite and coated underground and aboveground storage tanks, but offers a general listing for flammable and combustible liquids that includes high-percentage blend ethanol fuels such as E85. Accepted industry practices have been well established to require regular inspection and maintenance procedures to mitigate the higher potential for degradation associated with higher blend ethanol fuels."

[http://www.ul.com/regulators/E85\\_storage\\_FAQs.pdf](http://www.ul.com/regulators/E85_storage_FAQs.pdf)

#### Biodiesel

Underwriters Laboratories Inc. has announced that products intended to use biodiesel blends up to B5 that are compliant with applicable ASTM International fuel standards will not require special investigation by UL. This is consistent with ASTM standards for heating oil and diesel fuel, which were recently updated to indicate that B5 blends may be considered the same as the conventional petroleum fuels under their scope.

<http://www.ul.com/gasandoil/b5.html>

Underwriters Laboratories also offers a "UL Consumer Fact Sheet" related to biofuels. UL is in the process of finalizing product safety requirements for equipment specified for use with biodiesel (B100) and biodiesel blends up to B20. At this time there is no specific certification program offered by UL for biodiesel fuels in excess of B5.

[http://www.ul.com/regulators/educational/FactSheet\\_Biofuels.pdf](http://www.ul.com/regulators/educational/FactSheet_Biofuels.pdf)

As the United States implements a new energy independence policy the use of alternative fuels like ethanol and biodiesel will become more widespread. Underwriters Laboratories at this time does not issue specific certification programs addressing each of these new fuels. We therefore must rely on other organizations such as those listed in this letter to address the concerns of fuels use and compatibility.

Modern Welding Company of California, Inc has been manufacturing steel fabricated products for more than 75 years. Modern Welding Company of California, Inc. is a major supplier of steel storage tanks for ethanol and biodiesel production facilities including tanks used in the blending processes of both ethanol and biodiesel fuels. Visit our website at [www.modweidco.com](http://www.modweidco.com) for an overview of our steel products and capabilities.



## Steel Tank Institute Steel Plate Fabricators Association

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2

Tank Manufacturers and their tank model numbers

### **Modern Welding Company**

Model 10, Glasteel ACT-100 Type II

Model 16, Glasteel ACT-100 Type I

Model 13, Glasteel II, Jacketed Secondly Contained Construction

### **Mosier Brothers**

ACT-100

Permatank

Vacuum Double Wall

### **Perkins Welding**

Sti-P3, SW and DW



## Modern Welding Company

Subsidiaries Nationwide  
 Fabricator of Quality Metal Products offering Coast to Coast Service  
[www.modweldco.com](http://www.modweldco.com)

### Storage of Ethanol Fuel in Underground Tanks Modern Welding Company Subsidiaries

Manufacturer	Dates Manufactured	Type of UST Construction	Applicable for use with 10% ethanol (E10)	Applicable for use with 30% ethanol (E30)	Applicable for use with 100 ethanol (E100)
Modern Welding Co.	May, 1962 - Present	UL-58 Construction	✓	✓	✓
Modern Welding Co.	1969 - Present	St-P3 <sup>®</sup> , SW & DW	✓	✓	✓
Modern Welding Co.	May, 1990 - Present	UL-1746	✓	✓	✓
Modern Welding Co.	1991 - Present	ACT-100 <sup>®</sup> , SW & DW	✓	✓	✓