Guide for Use of Methanol in Propane

Methanol is an alcohol that is sometimes added to propane to help prevent freezing of valves and regulators. Treatment with methanol is indicated if these conditions apply:

1 Fuel Conditions

- Water content analysis shows the fuel has high water content.*
- The fuel fails the valve freeze test.
- Fuel from this supplier has a history of freezing problems.
- Presence of water bottoms in transport or storage tanks is known.

And

* Contents greater than 35 to 50 mass ppm are considered high.

2 Ambient Conditions

- Ambient temperatures below 35 F (1.7 C) are expected.

Or

3 No Fuel-Related Issues, But

- Very cold temperatures (lower than –20 F [–30 C] are expected.
- A large drop in ambient temperature is expected.

! Treatment with methanol is not indicated if these conditions apply:

- The fuel is known to have been treated with methanol already.
- Ambient temperatures are not expected to be below 40 F (5 C)

Precautions for Handling and Using Methanol

Methanol is flammable and the vapors are toxic. In addition, methanol can be absorbed through the skin. When handling methanol, always use gloves rated for use with methanol, preferably butyl rubber gloves. Consult the manufacturer's guidelines to ensure the gloves are suitable for work with methanol. Check the manufacturer's MSDS for further safety information.

Unnecessary or excessive treatment with methanol is to be avoided. Excessive treatment can affect hoses, seals, gaskets, and other rubber/plastic components, and there may be issues of internal tank corrosion.

Methanol is very hygroscopic, which means it readily absorbs moisture from the air. In order to avoid adding water with the methanol, always purchase anhydrous (dry) methanol, and keep methanol containers closed to seal out air.

Documentation

If you add methanol to propane but are not the final fuel retailer, be sure to document the presence of methanol and the treatment rate on the invoice, bill of lading, or other documents that describe the fuel. Check the invoice or bill of lading to determine whether propane you receive has methanol added. This can help avoid "double dosing."

Treatment Rate

The base treatment rate is 600 mass ppm of methanol. The equivalent rate using other units of measure are:

- 3 pints per 1000 gal propane
- 2.5 lb methanol per 1000 gal
- 0.6 lb methanol per 1000 lb propane
- 0.5 kg methanol per 1000 liters propane
- 0.6 liters methanol per 1000 liters propane
- 0.6 kg methanol per 1000 kg propane

Rates for Typical Tank Sizes

Tank Size (gal)	Methanol to be Added		
	Liquid Oz	Liquid Pints	Pounds
250	12	¾	0.63
500	24	1 ½	1.25
1,000	49	3	2.5