

Still Using No. 1 Diesel ? Think Again.

Historically, No. 1 diesel was used to improve the wintertime diesel operability characteristics of No. 2 diesel fuel. If you've been doing this, it's time to reconsider.

Over the last several years, many factors have changed, including:

- Methods of extracting crude
- Changes in refining processes
- Reductions in allowable sulfur content
- Improvements in engine technology

Common Winter Operability Terms

- **Cloud Point:** The temperature at which fuel first starts to haze (cloud) due to wax precipitation
- **Pour Point:** The lowest temperature at which fuel will still flow; the temperature when the fuel becomes solid. For example, room temperature honey is too viscous to pump and would plug a filter. However, it still flows from the jar.
- **Cold Filter Plugging Point (CFPP):** A measure of the ability of a fuel to be filtered as a function of temperature; the temperature when fuel plugs a filter.

But, perhaps the most significant advancement is our understanding of how wax particles in ultra-low-sulfur diesel (ULSD) cause winter operability issues and how we can control them through cold-flow chemistry.

Over the past seven winters at 15 terminals across the Midwest, No. 2 diesel treated with FS SURE-FLO™ was compared to a 70% No. 2 / 30% No. 1 fuel dilution. On average, the dilution with No. 1 lowered the CFPP of No.2 ULSD by only 5.5°F. Meanwhile, a single treatment of SURE-FLO reduced the CFPP by over 20°F. A double treatment of SURE-FLO reduces CFPP by over 27°F. See the chart below.

Fuel treated with FS SURE-FLO outperforms No. 1 fuel dilutions with better economics and without sacrificing fuel efficiency associated with the lower BTU content of No. 1 diesel. Cold-flow improvers like FS SURE-FLO are clearly the better choice.

For more information on utilizing FS SURE-FLO in your wintertime operations, contact your local FS Energy Specialist today.

