



## ***Product One Voice***

### ***Q&A***

**Product: AMSOIL Cold Flow Improver (ACF)**

**Product Area: Specialty Products**

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#### **1. Question:**

Will the new AMSOIL Cold Flow Improver (ACF) adequately treat federally regulated ultra low sulfur diesel fuel (ULSD)?

**Answer:**

Yes, ACF is specifically designed for ULSD fuels. This diesel fuel is more difficult to properly treat for improved cold flow properties. AMSOIL Cold Flow Improver is also effective in improving cold temperature properties of low sulfur, high sulfur, and biodiesel fuels.

#### **2. Question:**

What are some key benefits of using AMSOIL Cold Flow Improver?

**Answer:**

Key advantages include:

- Reduction in pour point of the fuel, allowing it to flow more freely to the engine
- Improvement in the prevention of fuel filters from plugging in cold temperatures
- Dispersion of water to control ice formation in all parts of fuel systems
- Improvement in diesel engine reliability in cold temperatures
- A wide range of capabilities including biodiesel and hard to treat USLD applications
- Minimization of the need for blending standard #2 diesel fuel with lower quality #1 diesel fuel
- Heating oil and kerosene compatibility

#### **3. Question:**

What is the treat rate for AMSOIL ACF?

**Answer:**

The treat rate is 2 ounces of additive to 5 gallons of fuel or one 16 ounce bottle to 40 gallons of fuel. The bottle is translucent and is graduated for accurate dispensing to ensure the correct amount is added.

#### **4. Question:**

The original AMSOIL Cold Flow Improver solidified when I left it in my truck over night, what is different with the reformulated product?

**Answer:**

The new AMSOIL Cold Flow Improver will not show any signs of solidifying until the temperature reaches -22° F (-30° C) while the original product solidified at 0° F (-18° C). AMSOIL recommends long term storage of ACF above 0° F (-18° C). Freezing will not harm ACF and it can be used once thawed.

#### **5. Question:**

How can AMSOIL ACF work if it freezes at -22° F (-30° C)?

**Answer:**

ACF is designed to depress the point at which wax crystals begin to form in diesel fuel. It should be added to the fuel before the vehicle is exposed to extreme temperatures. If ACF becomes partially solidified, it should be warmed before adding it to diesel fuel where it will completely dissolve and depress the formation of wax crystals. ACF must be added to diesel fuel above the temperature at which the fuel becomes cloudy and shows evidence of wax formation to deliver the outlined benefits.

**6. Question:**

What should I do in the winter to adjust for the cold temperatures?

**Answer:**

AMSOIL recommends that you start with a diesel fuel that has been blended for winter use which establishes a good base fuel for treatment. Addition of AMSOIL ACF will ensure that your engine or heating system will continue to function well on those very cold days when you need them most.

**7. Question:**

Should ACF be used in diesel fuel to keep previously gelled fuel from clogging the delivery system?

**Answer:**

No. As temperatures drop, wax begins to crystallize in diesel fuel as it reaches the cloud point. Below this temperature, wax crystals will readily agglomerate and ACF is not effective in reversing this gelled state. These wax crystals will eventually clog the filter and starve the engine of fuel or prevent it from starting. AMSOIL Cold Flow Improver must be added to the fuel to prevent formation of wax crystals before it gets cold enough for gelling to begin. Low quality fuels may form wax crystals at temperatures approaching 40°F. AMSOIL recommends ACF be added to fuel when temperatures reach 32°F, which is above the cloud point in most diesel fuels.

**8. Question:**

What type of performance can I expect from the new AMSOIL Cold Flow Improver?

**Answer:**

ACF was tested by an independent laboratory using ULSD fuel and it improved pour point by 58°F (32°C) and lowered the cold flow filter plugging temperature (CFPP) by 34°F (19°C). Performance benefits are highly dependent on fuel type and quality.

**9. Question:**

Competitive products claim better cold temperature properties than ACF. Is this accurate?

**Answer:**

AMSOIL tested ACF against a leading provider of diesel fuel cold flow improver as part the development. ACF compared very favorably, particularly with B20 biodiesel and ULSD. Competitive claims can be misleading so it is important to distinguish the difference between CFPP and pour point. Many competitive products make great pour point claims leading consumers to believe the product is superior, when in reality the CFPP is inferior. CFPP depression temperature is a more accurate indicator of cold weather performance issues because clogged filters are the root cause of most of the problems. In addition, some competitive claims may not include testing with ULSD fuel which is fast becoming the standard diesel fuel in the U.S.

**10. Question:**

Why shouldn't I just use #1 diesel fuel if available?

**Answer:**

While #1 diesel has an advantage in low temperature operability, there are several disadvantages as well. The BTU content of #1 diesel is about 95% that of #2 diesel, and as a result, it reduces fuel economy and horsepower. #1 diesel contains kerosene and can have a detrimental effect on fuel pump and fuel distributor life due to inferior lubricating properties. #1 diesel is also more expensive.

**11. Question:**

Does ACF work with #1 diesel fuel?

**Answer:**

Yes, it functions well and further enhances #1 diesel fuel cold temperature properties. In very cold weather, using AMSOIL Cold Flow Improver with #1 diesel fuel is recommended for great winter weather protection for diesel fueled vehicles.

**12. Question:**

What are the differences among diesel fuels, heating oils and kerosenes?

**Answer:**

Diesel fuels, heating oils and kerosenes are all products distilled from crude oil. While they are similar, there are some critical specification and legal differences among the products that prohibit companies or individuals from using them interchangeably. Because each fuel type was designed for a specific application; combining them to can lead to harmful and sometimes costly problems.

**Fuel type and application**

Diesel fuels	Internal combustion engines (injection with compression ignition)
Heating oils	Oil burners/Furnace (injection with direct flame)
Kerosene	Lamps and non-vented heaters (wick burning)

Each of these fuels is designed for the environment / application in which it will be consumed. The properties that make a fuel effective in one area may add cost or create a problem in another area. Other key differences are the delivery and filtering systems used in each environment/application. A coarsely or unfiltered fuel in a system that has fine mist injectors would likely create major issues requiring disassembly for cleaning and in some cases, costly repairs.

**13. Question:**

Can I use ACF in my home heating fuel?

**Answer:**

Yes, it does an excellent job improving the cold temperature properties of heating oil. ACF is perfectly suited and recommended for diesel fuel, heating oils, and kerosene distilled crude oil products.

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