



## PRODUCT TECHNICAL BULLETIN

# FLASH 21 FUEL GELLING AGENT FREQUENTLY ASKED QUESTIONS

### FLASH 21 - WHAT IS IT?

- FLASH 21 is a 2-part phosphorous(A) / iron(B)-based hydrocarbon gelling agent that can be used with most available fuels
- Is much more user-friendly and efficient than previous gelling agents
- Rapid gel times allow burn specialists to react quickly to changing conditions in the field

### HOW SHOULD FLASH 21 BE STORED AND HANDELED?

- FLASH 21 A and B can be placed in cold storage areas, freeze/thaw cycles do not affect product performance or stability
- Storage facilities should be equivalent to a fuel storage location
- For previously frozen product, give the container a brief shake before use to remix any components that may have fallen out of suspension

### BASIC MIXING PROCEDURES

- Thoroughly flush all system components before use if residuals from other products may be present
- Add FLASH 21A to fuel container and stir for one minute
- Add FLASH 21B to fuel container, and stir until suitable gel has been produced, usually within a couple of minutes

- DO NOT mix FLASH 21A and FLASH 21B together outside the solution, and then add the blended mixture to the fuel
- DO NOT add other products to a FLASH 21 solution (i.e. Sure Fire or Petro Gel) - they will drastically impair the gelling action and viscosity retention properties

### MIXING WITH ETHANOL FUEL

- Flush system as previously mentioned
- Add FLASH 21A to fuel and stir for 1 min.
- Add FLASH 21B to mixture, stir for 1 min.
- If timing is critical, add an amount of freshwater equivalent of 5% of the amount of ethanol blended fuel to "tie" the ethanol and allow gelling to occur
- Additional FLASH 21 may be required to achieve desired viscosity, double works well
- An amount of water in excess of the true amount of ethanol in the blend will result in a small amount of "free water" in the gel, which MAY create marginal differences in performance
- Adding water at 2%, and progressing upwards will prevent free water, but adds slightly to mix times
- Ethanol/water component of gel will fully exit the gel structure within approximately 12 hours, and settle in the form of a thin, brownish liquid at the bottom of the vessel
- Shaking or stirring the gel briefly is all that is required to put the precipitate back into the gel structure

### ALTERING GEL VISCOSITY

- FLASH 21 components act upon the carbon component of the fuel used
- Higher carbon fuels such as diesel fuel produce a thicker gel structure than fuels such as gasoline
- Blending fuels prior to gelling allows burn specialists to tailor gel viscosity to needs, gel structure will reflect carbon content of blend
- Adding additional FLASH 21 A and B to light fuels will also serve to increase viscosity

### COLD WEATHER MIXING

- Low temperatures will result in slightly increased gelling time
- Heavier, higher flash point fuels should be mixed with 25% gasoline to increase volatility and subsequent ease of ignition
- Straight gas is the most effective

### WHAT FUEL TYPES CAN FLASH 21 BE MIXED WITH?

FLASH 21 can be mixed with the following fuel types:

- Gasoline
- Diesel
- Jet A
- Jet B
- Ethanol blended gasoline (with conditions\*)

\*Refer to FLASH 21 product datasheet Form Number PCC-2019049 for details



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