

S-2 SURFACTANT

Applications:

S-2 is a surfactant that provides low surface and interfacial tension properties to water based fracturing fluids. The addition of S-2 to water based fracturing fluids greatly lowers the surface and interfacial tensions and consequently reduces the capillary pressure that must be overcome to remove liquids from the formation. Water blockages in gas wells and emulsions in oil wells are often created by fresh water being lost to the formation. The surface tension of fracturing fluids treated with S-2 is reduced from 72 dynes/cm to approximately 30 dynes/cm. Most crude oils and condensates will be non emulsifying with water based fracturing fluids when treated with S-2. S-2 is non-ionic and tends to leave the formation water wet. S-2 is normally run at 0.1% for gas wells and 0.2% for oil wells.

Properties:

Appearance Clear viscous straw colored liquid
Solubility Soluble in water and hydrochloric acid
Flash Point <100°F
Specific Gravity 0.94
Pour Point <32°F

Advantages:

- Non-ionic charge makes S-2 non-reactive with common fracturing additives.
- Reduces the interfacial and surface tension of water from 72 dynes/cm to 30 dynes/cm at a 0.1% loading.
- Strongly water wets both sandstone and carbonate formations.
- Exhibits demulsification properties with most crude oils and condensates, although each should be checked for compatibility.

Handling Precautions:

- Flammable liquid and vapor
- Direct skin or eye contact may cause irritation; flush with water as soon as possible.
- Refer to Material Safety Data Sheet.



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Acidizing – Surfactants

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