

## INFORMATION

# OIL AID-FA-4

ACID FOAMING AGENT

### DESCRIPTION

OIL AID-FA-4 is a zwitterionic and nonionic surfactant blend primarily designed as a foaming agent for acidic media. OIL AID-FA-4 has application in both well clean-out and acid foam fracturing. Its typical properties are:

Specific Gravity, 60 °F		1.073
Weight, 60 °F, lbs/gal		8.94
Flash Point, °F, SFCC		200
Pour Point, °F		-15
Viscosity, SUS 60 °F		423
Viscosity, SUS 30 °F		1255
Solubility:		
	1% in Water	Soluble
	1% in Methanol	Soluble
	1% in Kerosene	Insoluble
	1% in 15% HCl	Soluble
Ionic Charge		Zwitterionic
pH		7.4

### APPLICATION

When added to acid treating solutions, OIL AID-FA-4 aids in the clean-up of gas wells by causing spent acid and water to be foamed out of the well. OIL AID-FA-4 foams acid or water effectively in the presence of all normally occurring oil field water, and is stable in the presence of clay solid and crude oil or distillate influx. By varying the concentration of OIL AID-FA-4 and the mechanics of producing the foam, OIL AID-FA-4 foam consistency can be varied considerably to match the formation, penetration rate, and frac sand transporting ability required in acid foam frac applications.

### RECOMMENDED TREATMENT

OIL AID-FA-4 can be added to the acid in the storage tank before pumping or it can be added in line during pumping operations. The recommended concentration of OIL AID-FA-4 is 1% or 10 gallons per thousand.

**PACKAGING**

OIL AID-FA-4 is available in 55 gallon drums.

OIL AID-FA-4 is a Messina trademark