



# OIL AID AR 652

## ANIONIC SURFACTANT

### DESCRIPTION

OIL AID AR-652 is a highly effective anionic surfactant which slows the reaction rate of hydrochloric acid in carbonate reservoirs. This occurs as a result of a filming action on the carbonate surface which partially blocks the hydrogen ion migration. It is effective at bottom hole temperatures as high as 300° F and is compatible with most acid inhibitors. Its typical properties are:

Color	Straw
Odor	Mild
Specific Gravity (approximate)	0.95 - 1.03 @ 60° F
Pour Point	25° F
Flash Point	70° F (TCC)
pH	8.8 - 9.0
Nature of Charge	Anionic

### APPLICATION

OIL AID AR-652 can be used effectively in varying strengths of hydrochloric acid, from the commonly used 15% acid to 30% acid. Without physical and chemical retardation, most of the acid reaction occurs immediately adjacent to the well bore. Several steps can be taken to increase acid penetration distance from the well bore in an acid stimulation treatment. The most obvious of these is through the use of a superior chemical retarder such as OIL AID AR- 652. Using a fluid pad in conjunction with the retarded acid will also lessen the reaction of the acid at the well bore and extend the acid etching pattern. A gelled water pad of 50% to 100% of the size of the acid treatment is particularly effective. An effective fluid loss additive such as OIL AID FLA should be used in this pad. In deep, high temperature wells, this pad also has a cooling effect which is helpful in retardation, as well as in aiding the acid inhibitor. OIL AID AR-652 has been used effectively in wells with bottom hole temperatures of over 300° F. Some operators often prefer to run a small kerosene spearhead instead of gelled water. Although not as effective as using a large gelled fluid pad, this will aid the retarder in increasing the effective etching distance. In addition, the reaction rate can also be slowed by adding 5% kerosene to the acid retarder blend. Increasing the pumping rate can also increase the effectiveness of a chemical retarder.

OIL AID AR-652 can be used with most acid inhibitors, but if another inhibitor is used, it would be well to check compatibility. Acid retardation tests vary, but the standard laboratory tests which indicated a competitive product to be a good retarder show

OIL AID AR-652 to be considerably superior. Using 5 gal of the competitive product in a test running 45 minutes, only 2% of the acid remaining in the cell is unreacted. With 5 gal OIL AID AR-652, 18% of the acid is unreacted after 45 minutes. This means more acid etching penetration per dollar for the operator.

### FEEDING AND DOSAGE



OIL AID-AR-652 is normally used at a dosage ranging from 5 gal per 1,000 gal of 15% HCl to 10 gal OIL AID-AR-652 per 1,000 gal of 30% HCl. Required dosage may vary based on well conditions. OIL AID-AR-652 should be added directly to the acid mixture and agitated thoroughly.

## HANDLING

OIL AID-AR-652 may cause irritation to skin and eyes. Care should be taken to avoid contact with skin, eyes, and clothing. Do not take internally. In case of contact, wash skin with soap and water; for eyes, immediately flush with large amounts of water for at least 15 minutes, and get medical attention. Remove contaminated clothing and wash before reuse.

## PACKAGING

OIL AID-AR-652 is available in 55 gal non-returnable steel drums, FOB Messina's warehouse, Houston, Texas.

OIL AID-AR-652 is a Messina trademark

