

## DF-FCR24™

Product Description **DF-FCR24** is a mixture of acid precursor, enzyme and chelating agent, utilized as a filter cake breaker and delayed acid generator that is used for the slow release of acid, **DF-FCR24** when spotted downhole it generates acid that solubilizes the calcium carbonate and cellulosic fiber in the drill in fluid filter cake.

**DF-FCR24** breaker product improving overall hole clean-up, Suitable for use in most brines at temperatures from  $100-250^{\circ}$ F ( $37-121^{\circ}$ C) to give break times of up to 24 hours.

## Application Areas

- **DF-FCR24** acid released will reacts with and dissolves the calcium carbonate and cellulose in the filter cake, which eliminate the filter cake and removing mud damage.
- **DF-FCR24** filter cake breaker is dissolved in any brine (NaCl –CaCL2 –KCL).
- **DF-FCR24** acid liberation action is slow.

#### **Advantages**

- Provides excellent performance in all brines.
- liberation of the generated acid will be over hours which starts to dissolve the calcium carbonate and the residual of polymers and cellulosic fibers .
- No HSE concerns like other acids.
- All components are environmentally acceptable.

# Typical Properties

- Appearance..... brown liquid
- Specific Gravity @25°C...... 1.0
- Flash point......100°C
- Pour point..... 3°C

## Recommended Treatment

Normal treatment rate would be 12% - 20% (v/v), but in general, the optimum concentration should be identified on a case-by-case basis taking into account conditions such as completion technique hole diameter etc.

#### Safe Handling

Apply normal precautions for employee protection when handling chemical products. Utilize appropriate respirator, gloves, goggles and apron. Refer to the Material Safety Data Sheet for this product prior to use.

#### **Packing**

DF – FCR24 is packaged in 55-gal steel drum containing (180 kg.net weight)

#### **Safe Handling**

Utilize normal precautions for employee protection when handling chemical products. Utilize appropriate respirator, gloves, goggles and apron while mixing. Refer to the Material Safety Data Sheet (MSDS) for this product prior use it.

1