

# STAR-DET ECO



STAR DET ECO drilling detergent is a liquid blend of specialty surfactants designed to reduce the surface tension of water base mud systems and reduce the sticking tendency of reactive shale and clays.

## Application

STAR-DET ECO can be used in almost any water base drilling fluid. It is used primarily in surface and intermediate sections during drilling to minimize bit and BHA balling and mud rings. STAR-DET ECO reduces torque and drag. Treatments range from 0.1 to 0.2 lb/bbl (0.29 to 0.57 kg/m<sup>3</sup>) under normal drilling conditions. In severe gumbo shale areas, 4 to 6 lb/bbl (11.4 to 17.1 kg/m<sup>3</sup>) of STAR-DET ECO are recommended to minimize bit and BHA balling. It is effective in all water base systems including freshwater, brackish water, seawater and saturated saltwater fluids.

## Advantages

- Minimizes bit and BHA balling
- Improves water-wetting action on all solids and reduces the sticking tendency of reactive shalecuttings
- Functions as an emulsifier, reducing the viscosity of oil-contaminated fluid

## Typical Usages

Typical Amounts of STAR-DET ECO Added to freshwater		
Drilling Application	lb/bbl	kg/m <sup>3</sup>
Normal drilling	0.1 - 0.2	0.3 - 0.6
Clay/Shale	4 - 6	11.5 - 17

## Advantages

Physical Appearance	Light Brown
Specific Gravity	1.01 – 1.02
Solubility in Water	100%
pH (1% solution)	7.5 – 8.5
Freezing Point	32° F (0° C)

## Packaging

STAR-DET ECO is packaged in 5-gal (18.9-L) pails.