STAR SHIELD®

Wellbore Stabilizer





DESCRIPTION

STAR SHIELD® wellbore stabilizer is a preventative wellbore shielding® additive enabling operators to successfully drill in challenging formations. STAR SHIELD protects the formation by minimizing fluid and pressure invasion into matrix pores and microfractures by creating a 'shield' against the rock-fluid interface. STAR SHIELD technology – the additive advantage, adopted by major operators in unconventional shale plays in North America and deepwater Gulf of Mexico.

ADVANTAGE

Operators drill safely with mud densities greater than the fracture initiation pressure

Eliminates differential sticking in high permeability formations

Does not shear degrade and has a broad particle size distribution

High temperature stability over 204°C (400°F)

APPLICATION

Seals up to 250 μm fractures at high differential pressure

Performs in circulating system with API 70 mesh screens

Effective in water-, oil- or synthetic-based drilling fluid systems

RESERVOIR PERFORMANCE

Demonstrated to be non-damaging in independent third party testing

Lab testing using tight perm field rock and 350mD Clashach cores demonstrates low flow initiation pressure

ENVIRONMENTAL ADVANTAGE

Environmentally compliant for use in all areas in North America

Passes the North America 96-hr LC50 bioassay mysid shrimp

TREATMENT RECOMMENDATIONS

Effective at concentrations as low as 3-12 lb/bbl

Designed for use in the circulating fluid system

Concentration can be monitored by Impact's proprietary Sand Bed Tester

PHYSICAL PROPERTIES

Appearance: Light tan powder

Specific gravity: $1.6-1.7 \text{ g/cm}^3$ (13.4-14.2 lb/gal)

Does not contain graphite, asphalt, gilsonite or other black powder based material

HANDLING AND STORAGE

STAR SHIELD® should be stored in a dry environment. Avoid excessive dust and inhalation. Use appropriate PPE and review the SDS before use.

PACKAGING

STAR SHIELD® is available in 25-lb, multi-walled bags – 48 sack per pallet.