

**SPOTTING FLUID****GENERAL INFORMATION**

Pipe Free™ spotting fluid is a concentrate designed to be mixed, and weighted easily at the rig site. Differential sticking problems when using water-based muds require fast easy-to-mix spotting fluids to be placed across the problem zone as soon as possible. Pipe Free™ spotting fluid is especially designed to be weighted up to 18.0 ppg (2.15 S.G.) using just mineral oil or diesel, water and barite.

Pipe Free™ spotting fluid is a blend of emulsifiers, gelling and suspension agents and wetting agents in one drum.

**TYPICAL PROPERTIES**

Appearance:	Brown, viscous liquid
S.G.:	1.0 @ 20 °C
Flash point:	> 93 °C
Viscosity:	200 cps @ 40 °C
Thermal stability:	> 200 °C

**FORMULATION**

The table below shows the formulation for mixing 50 bbls of the complete weighted spotting fluid

Mud Weight ppg	Mineral oil bbl	Pipe Free drums	Water bbl	Barite MT
8.0	30	3	18	0.5
10.0	29	3	13	3.2
12.0	27	3	11	5.7
14.0	25	3	10	8
16.0	25	3	6	10.5
18.0	22	3	5	12.9

**MIXING INSTRUCTIONS**

- Clean and flush mixing lines and relevant mixing pit.
- Add mineral oil or diesel followed by Pipe Free™ spotting fluid and water via mud hoppers.
- Shear through mixing centrifugal pumps for 30 minutes.
- Add required amount of barite until density achieved

**APPLICATION**

Differentially stuck pipe becomes more stuck with time. It is important to mix and place the spotting fluid as soon as practicable. It is advised to mix an excess of spotting fluid so that sufficient volume is left inside the drill string to allow 1-2 bbl per hour of fresh fluid to be pumped across the stuck zone.

**PACKAGING**

Pipe Free™ spotting fluid is packaged in 180 kg steel drums..