

## Marsh Funnel Viscometer

### Description

Fann No. 201 Marsh Funnel Viscometer is a simple device for indicating viscosity on a routine basis. When used with a measuring cup, the funnel gives an empirical value for the consistency of a fluid. This number (time in seconds) depends on (1) the effective viscosity at the rate of shear prevailing in the orifice, and (2) the rate of gelation.

Funnel viscosity is the ratio of the speed of the sample as it passes through the outlet tube (shear rate) to the amount of force (fluid weight) that is causing the fluid to flow (shear stress).

Marsh Funnel viscosity is reported as the seconds required for one quart of fluid to flow from a full Marsh Funnel.

### Application

Marsh Funnel readings are qualitative measurements. Frequent reporting of Marsh Funnel viscosity will show changes in fluid viscosity that could require corrective action.

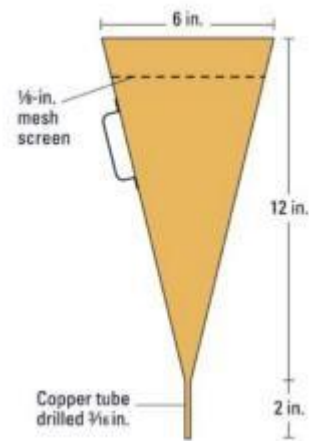
Mud engineers depend on the Marsh Funnel to check the quality of drilling mud.

### Features and Benefits

- Quick, on-the-spot measurements for periodically reporting mud consistency
- Simple, low-maintenance
- Transports easily for use in the lab, field, or on drilling rig
- Rugged, break-resistant plastic that holds shape with temperature changes



No. 201 Marsh Funnel and No. 202 Measuring Cup



*The Marsh Funnel is precision-made to outflow one quart of water at 70 ± 5°F in 26 ± 0.5 seconds.*

### Calibration Instructions

Marsh Funnel calibration is easily checked by measuring the viscosity of fresh water. The funnel is dimensioned so that the outflow of one quart (946 ml) of fresh water at  $70 \pm 5^{\circ}\text{F}$  ( $21 \pm 3^{\circ}\text{C}$ ) is  $26 \pm 0.5$  seconds.

If the funnel is out of calibration, clean it again using a pipe cleaner, making sure that nothing is blocking the outlet.

If the funnel continues to give an incorrect reading for fresh water after cleaning, then replace the funnel.

### Ordering Information

In addition to the Marsh Funnel, this viscosity procedure requires a graduated container to receive the fluid as it flows from the funnel, a device to measure elapsed time, and a thermometer for measuring sample temperature.

PART NO.	DESCRIPTION
206884	Marsh Funnel Viscometer, Plastic, No. 201
206889	Measuring Cup, 1000 ml, Plastic, No. 202
206898	Digital Stopwatch
206037	Metal Dial Thermometer, $0^{\circ}\text{F}$ to $220^{\circ}\text{F}$

### Accessories (Optional)

PART NO.	DESCRIPTION
206893	Measuring Cup, 500 ml, Stainless Steel
206894	Measuring Cup, 1000 ml, Stainless Steel
206895	Measuring Cup, 2000 ml, Stainless Steel
206897	Seven Jewel Analog Stopwatch
206044	Digital Thermometer (Fahrenheit and Centigrade)

*This instrument and the test procedure complies with ASTM Standard D6910/D6910M- 09 Standard Test Method for Marsh Funnel Viscosity of Clay Construction Slurries and API RP 13B-1.*