

# SUPRA FOAM

## DRILLING FOAM

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### DESCRIPTION

**Supra Foam** is easily mixed and environmentally safe. When used alone, add 1 quart (1 liter) **Supra Foam** to one barrel (42 gallons) of water. Inject at a rate of 1 gallon (3.79 liters) per minute. **Supra Foam** is available in 5 gallon (19 liter) pails and 55 gallon (208.5 liter) drums

### SUPER AIR DRILLING SYSTEM

This system combines the use of **Supra Foam**, and **Super Mud**, a polymer drilling fluid, which allows drilling of larger diameter, deeper holes with less air than before. Lower air consumption compared to straight air or other foam systems, equipment and fuel costs are greatly reduced and well yields are increased by up to 50%. This system can be used to drill both unconsolidated and consolidated formations. It works on the principle of using the compressor and foam in lieu of using a mud pump and fluid on a fluid drilling rig. In this system, the low volume of air, **Supra Foam** and **Super Mud** continually provides lubrication, cutting removal, and side wall stability for fast and efficient drilling.

### EQUIPMENT NEEDED

- Two mixing tanks, no less than 55 gallons (208.5 liters) each.
- A piston high pressure injection pump with a minimum 6 GPM (22.7 LGM) capacity.
- A blooie line and adequate surface pipe to seal top of hole from erosion. The top of the surface pipe should be fitted with hole wiper to control foam and cuttings.
- Removal all jets from bit; high air pressure is not required at the bit.

### MIXING PROCEDURE

Injection mixture composition is 5 lbs (2.5 kg) soda ash, 1 pint (0.5 liter) **Super Mud**, and 1 quart (1 liter) of **Supra Foam** per 55 gallons of fresh water. All components are mixed easily with mild agitation. However, soda ash and **Super Mud** should be added prior to mixing in **Supra Foam**. After addition of **Supra Foam**, agitate sparingly to minimize froth.

### USAGE

Begin drilling with only 50% of the volume used in straight drilling. Start injection pump at approximately 2-3 GPM for 6"-8" diameter holes. This setup should yield an air flow rate equal to that of a fluid system or about 125 ft/minute up hole velocity rather than the typical 3000 ft/minute that is required with normal air drilling. Adjustment of compressor volume and pressure may be necessary to suit the system requirements. The foamer will have a consistency similar to shaving cream. Rotation and penetration rates should be as with straight air. It is not necessary to blow at each connection because the **Super Air Drilling System** will suspend cuttings even without air flow. Control air and injection mix ratio so that flow out the blooie line is constant and not spurting. If the color of mixture is not white, correct by slightly increase flow of the injection mix. When drilling in water bearing strata, the flow of the water from the hole should not be any greater than that which would normally flow through the formation. This is due to the fact that when properly adjusted, the system does not vortex or pump the formation as would be the case with normal high pressure air. Under normal conditions, a 6"-8" diameter hole up to 150' requires 100 CFM @ 50 to 60 PSI air flow. In case of extreme water flow, it may be necessary to increase air pressure to unloading at pipe connections.

