



BENSEAL®

Sealing and Plugging Agent

Description BENSEAL is a granular (8-mesh), natural Wyoming sodium bentonite for use in sealing and grouting well casings and earthen structures. BENSEAL is not recommended for use as a drilling mud.

- Applications/Functions**
- Seal or grout plastic or steel casings in monitor and water well construction
 - Seal or plug abandoned boreholes
 - Seal leaking ponds, ditches and dams
 - Soil stabilization
 - Prepare BENSEAL/EZ-MUD® grouting system
 - Aid in controlling loss of circulation

- Advantages**
- High swelling capacity
 - Uniform particle size
 - No heat of hydration
 - Prevents commingling of aquifers and contamination from surface
 - Forms a flexible seal to protect casing from corrosive contaminants
 - Allows for hole re-entry
 - ANSI/NSF Standard 60 certified

- Typical Properties**
- | | |
|---------------------------------|--|
| • Appearance | Bluish to gray granules |
| • Dry screen analysis | 85% of 8 mesh |
| • Volume, ft ³ /sack | 0.7 (as packaged) |
| • Specific gravity | 2.6 |
| • Permeability | less than 1×10^{-8} cm/sec (in fresh water) |

- Recommended Treatment**
- As a casing drill and drive operation:**
1. Dig a cone-shaped depression around casing. Depression should be 6 - 8 inches (152-203 mm) larger than the outside diameter of the casing and 2 - 3 feet (60-75 cm) deep.
 2. Keep cone-shaped depression filled with dry BENSEAL while driving the casing.

**Recommended
Treatment
(continued)**

Note:

When drilling and driving a 4" (102mm) pipe, expect to use 2.5 pounds of BENSEAL® per foot of hole or 3.7 kilograms of BENSEAL per meter of hole.

Sealing ponds or earthen structures:

Depending on the native soil, disc in or mix 3 to 5 pounds of BENSEAL per square foot (14-24 kg/m²) uniformly over the area to be sealed so that a 6-inch (~152 mm) blanket of soil and BENSEAL is formed. Do not neglect the edges of the dam or the sides/walls of the pond. This sealing blanket should then be compacted in place and as a further protection to the sealing blanket, 2 to 4 inches (51-102 mm) of local soil or sand should cover the sealing blanket and be compacted. If the leaking area can be identified and isolated, an attempt can be made to broadcast BENSEAL uniformly at 4 to 6 pounds of BENSEAL per square foot (20-30 kg/m²) of surface area into the water over the area of concern.

Note: Bentonite is more effective as a sealing agent when confined. Therefore, every effort should be made to cover the BENSEAL after it is broadcast with a 2-3 inch (51-76 mm) layer of sand. This will reduce the potential for dispersion into the water and un-yielded bentonite particles interfering with the gill action of fish.

Lost returns (moderate):

1. Begin with the pit full of mud.
2. Raise the pump suction off bottom and place a shovel next to it and slightly under suction.
3. Pour dry BENSEAL slowly into the space between shovel and suction and pump it down the hole.

Packaging

BENSEAL is packaged in 50-lb (22.7 kg) multiwall paper bags, containing 0.7 ft³ (0.02 m³).

Availability

BENSEAL can be purchased through any Baroid Industrial Drilling Products Distributor. To locate the Baroid IDP distributor nearest you contact the Customer Service Department in Houston or your area IDP Sales Representative.

Baroid Industrial Drilling Products,

A Product and Service Line of Halliburton Energy Services, Inc.

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