



# BARAD-381™

## Cement Additive

**Description** BARAD-381™ cement additive is a dry, free-flowing powder designed to reduce the filtration rate and retard the set of Portland Cement slurries used in water well, minerals exploration and construction applications. When used in conjunction with Portland Cement at the recommended concentration, BARAD-381 cement additive creates a slurry with enhanced flow properties and improved bonding characteristics.

**Applications/Functions** *The use of BARAD-381 cement additive promotes the following:*

- Reduction of filtration rates in Portland Cement slurries
- Delay the set of Portland Cement slurries

**Advantages**

- Easy to use
- No additional water requirement for additive
- Enhances hydraulic bonding characteristics of cement
- Delayed set promotes additional working and placement time

**Typical Properties**

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|--------------------|----------------------|
| • Appearance       | White to gray powder |
| • Specific gravity | 2.5                  |
| • pH               | 11.8 (1% solution)   |

**Recommended Treatment**

**Approximate Amounts of BARAD-381 Cement Additive Added to Develop Cement Slurries**

***Added To Make-Up Water for Cement (Preferred Method)***

- Required Concentration: Add 2-lbs of BARAD-381 cement additive for every 94-lbs of Portland Cement
- Add BARAD-381 cement additive to the appropriate volume of make-up water and mix at high shear for 2-3 minutes prior to addition of Portland Cement
- Add Portland Cement to BARAD-381 cement additive/water mixture and mix at high shear to ensure efficient wetting of cement solids
- Pump BARAD-381 cement additive/cement mixture into annular space or borehole

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**Additive Dry Blended with Cement (Alternate Method)**

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- Dry blend 2-lbs of BARAD-381 cement additive with each 94-lbs of Portland Cement prior to addition of make-up water
- Dry blending should continue for 3-5 minutes to ensure even dispersion of BARAD-381 cement additive throughout the dry cement
- The BARAD-381 cement additive/cement blend should be added to the appropriate volume of make-up water and mixed at high shear to ensure efficient wetting of cement solids and hydration of the BARAD-381 cement additive

Pump BARAD-381 cement additive/cement mixture into annular space or borehole

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**Additional Information**

- BARAD-381 cement additive is designed to be used with ASTM Type I, API Class A, ASTM Type II, API Class B, ASTM Type III or API Class C Portland Cements
- BARAD-381 cement additive has no additional water requirement therefore the initial calculated volume of make-up water for the cement is all that is necessary for development of the final slurry

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**Packaging**

BARAD-381 cement additive is packaged in a 20-lb (9.1 kg) resealable plastic bucket containing 10 airtight sealed plastic bags. Each bag contains 2-lb (0.91 kg).

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**Availability**

BARAD-381 cement additive can be purchased through any Baroid Industrial Drilling Products Retailer. To locate the Baroid IDP retailer nearest you contact the Customer Service Department in Houston or your area IDP Sales Representative.

**Baroid Industrial Drilling Products**

**Product Service Line, Halliburton**

3000 N. Sam Houston Pkwy E.

Houston, TX 77032

**Customer Service** (800) 735-6075 Toll Free (281) 871-4612

**Technical Service** (877) 379-7412 Toll Free (281) 871-4613

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