

28100

281.00

Designer Note: Use in cases where it is necessary to lock riprap in place due to high velocities. Discuss with your Project Engineer and Construction before using.

### **GROUT FOR USE WITH RIPRAP**

Effective July 30, 2010

Description of Work. This work shall consist of furnishing and placing material to grout riprap in place. The riprap, bedding, and filter fabric shall be placed and paid for according to Sections 281 and 282 of the Standard Specifications.

Materials. The grout shall consist of a mixture of 490 lbs. cement, 1976 lbs. (dry weight) FA 01, 1039 lbs. (dry weight) CA 16, and 27.5 gallons of water per cubic yard. Alternatively, a mixture of 430 lbs. cement, 115 lbs. fly ash, 1937 lbs. FA 01, 1028 lbs. CA 16, and 27.5 gallons of water per cubic yard may be used. In either mixture, a high-range water reducer shall be used to attain desired consistency of the mix. The hardened grout shall have a minimum compressive strength of 2,000 pounds per square inch at 28 days.

Construction Requirements. The grout shall be pumped and placed throughout the riprap to a depth determined by the Engineer. A uniform rate of 0.22 cubic yards of grout per square yard of riprap was assumed to estimate a quantity. The grout shall fill the lower voids in the riprap and bond the riprap together.

Method of Measurement. The quantity of grout for use with riprap shall be measured in cubic yards, based on the volumes from the individual truck tickets used for the work.

Basis of Payment. This work will be paid for at the contract unit price per Cubic Yard for GROUT FOR USE WITH RIPRAP.