

TECHNICAL DATA

DESCRIPTION: **US Underwater Grout** is a specifically formulated combination of portland cement, fine sands, special admixtures and anti-washout admixtures. When mixed properly, **US Underwater Grout** yields a durable non-shrinking (expansive), non-staining grout with high bond and compressive strengths and low permeability. Mix **US Underwater Grout** to any consistency from plastic to flowable as job conditions warrant. Special admixtures allow placement into and under water without washing out of the cement paste and aggregates.

USE ON: Tunnel cavities, pile jackets, underwater anchoring systems, and cavity filling in marine environments

- ADVANTAGES:**
- Underwater formulation/ polymer modified
 - Excellent compressive and bond strength
 - Low permeability
 - Excellent bond to concrete substrates
 - Easy placement by hand or pump
 - Expansive

	1 DAY	7 DAYS	28 DAYS
Compressive Strength (ASTM C 942-99)	500 psi (3.4 MPa)	4000psi (27.4 MPa)	6000 psi (41.1 MPa)
Flow (ASTM C 1107)	30 seconds		
Setting Times	Initial 2 hours		Final 2.5 hours
Open Time	35 minutes		
Length Change (ASTM C 157)	+ 1.0 % (maximum)		
Density	140 lb/ft ³		

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MIXING:

For each 50 lb bag of **US Underwater Grout** add up to 128 fluid ounces of water. In a clean, appropriate, high speed, mechanical mixer add 75% of pre-measured water. With the mixer operating, add the **US Underwater Grout**. Add remaining water as needed to achieve the desired consistency. Continue to mix until a homogeneous consistency has been achieved. Do not add additional water and do not mix more than six minutes. Material should be continually re-circulated prior to placement to avoid thickening and settlement. Do not over mix. Should small quantities be required, be sure to proportion admixture, water and Portland cement accordingly.

LIMITATIONS:

US Underwater Grout should be used when ambient temperatures are at 40°F (4°C) and rising. Lower temperatures produce a slower set; higher temperatures produce a faster set. For temperatures below 40°F (4°C) consult with the manufacturer for special cold weather placement provisions which include but are not limited to conditioning of the materials, use of heated mix water and thermal protection. In hot weather use chilled water for mixing.

PACKAGING:

US Underwater Grout is packaged in 50 lb Kraft multi-wall, polyethylene lined bags. Yield when mixed with 128 ounces of water is approximately .42 ft³.

CAUTION: **WARNING! CONTAINS FREE SILICA & PORTLAND CEMENT. DO NOT BREATHE DUST.** May cause delayed lung injury (silicosis). Follow OSHA safety and health standards for crystalline silica (quartz). Cement powder or freshly mixed concrete grout or mortar may cause skin injury. Avoid contact with skin and wash exposed skin areas promptly with water. If any cement powder or mixture gets into the eyes, rinse immediately and repeatedly with water and get prompt medical attention.