

RUSSTECH®

AWA-C61

ANTI-WASHOUT ADMIXTURE AND VISCOSITY MODIFIER FOR CONCRETE

DESCRIPTION:

AWA-C61 is a liquid dispersion of a water-soluble polymer that prevents the washout of finer particles in plastic concrete by significantly increasing the cohesiveness and viscosity of the concrete mix during underwater concrete placements.

ADVANTAGES:

- Eliminates washout and mass loss of the fines in plastic concrete
- Helps to eliminate concrete bleed water
- Dramatically increases the cohesiveness of the mix consistency
- Maintains normal setting characteristics throughout most of the dosage range
- Can be introduced at the batch plant or jobsite
- Costs of dewatering can be reduced or eliminated
- Maintains same water demand to promote better strength development

APPLICATIONS:

- Any underwater concrete placements where resistance to washout of fines in the concrete mix are desired
- Highly fluid self-consolidating concrete mixes that require the use of a viscosity modifier to eliminate segregation.
- Mixes requiring reduction or elimination of bleed water.

DOSAGE RATE:

AWA-C61 is recommended for use at a dose of 2 to 20 fluid ounces per 100 pounds (130 to 1300 ml per 100 kg) of cementitious material for most underwater applications. Because local job conditions, materials, and applications vary, this product may require dosages outside the recommended dosage ranges.

TECHNICAL NOTE:

AWA-C61 should be incorporated into the mix after all other ingredients have been added and completely mixed. **AWA-C61** can be added at the batch plant or jobsite.

USE PER ACI 304R:

ACI-304R, Chapter 8 (Concrete Placed Underwater), Section 3 suggests certain mix proportions for underwater placements be followed. Some examples are:

- Pozzolanic admixtures, such as fly ash, should be used at rate of 15% of total cementitious
- Minimum cementitious of 600 lbs/yd. (356 kg/m)
- Water to cementitious ratio targeted at 0.45 (w/cm)
- 45% to 55% fine aggregate by volume all aggregates
- Slump range 6 to 9 in. (150 to 230 mm)
- Air content – 5%
- Concrete temperatures in the range of 60 to 90 degrees F (15 to 32 C) with a minimum concrete mix temperature of 40 F (5 C)

A water-reducing admixture, such as **FINISHEASE NC, LC-400P, or LC-500**, should be incorporated into all mixes containing **AWA-C61**. To produce flowing and pumpable concrete with a high slump and superior resistance to washout of the mortar fraction of the concrete, use **AWA-C61** with a high-range water-reducer such as **SUPERFLO 2000RM**.

It is recommended that all underwater concrete be placed continuously by tremie pipe or through a concrete pump per guidelines established in ACI 304R, Chapter 8.

MIX PROPERTIES:

Compressive Strengths:

AWA-C61 has little effect on the compressive strength of the concrete when designed according to ACI 304 R. When a lower water-cementitious ratio or higher compressive strength is necessary, the use of an additional high-range water reducer, such as **SUPERFLO 2000 RM**, will be needed. *Do not use SUPERFLO 443* or any polynaphthalene high range water reducer with **AWA-C61** as these materials are incompatible.

Set Time:

AWA-C61, when used within the recommended dosage range, has very little effect on set time. A small amount of retardation will be noticed when **AWA-61** is added at the higher end of the dosage range.

Bleed Water:

Bleed water is significantly reduced and may be eliminated in concrete mixes, neat mixes, and grout mixes.

Slump:

Underwater concrete mix designs should be batched at a minimum eight-inch slump. A decrease in slump should be expected after the addition of **AWA-C61**. A high-range water reducer may be added as necessary to meet specified slump for placement. Avoid using water to re-temper the concrete mix. Slump retention will be similar to normal concrete mixes.

Air Entrainment:

When using **AWA-C61** in a mixture, the air entraining admixture dosage requirement may be reduced to reach specified air content. Typically, as mix viscosities build there is an increase in the amount of entrapped air in the mix. As mixing is stopped and placement occurs these entrapped air bubbles will slowly leave the mix and the entrained air bubbles will remain. Field trials should be run to become familiar with this effect.

HANDLING PRECAUTIONS:

This product is best kept in sealed containers until ready to use. Precaution should be taken to prevent the contact of water, condensation or any aqueous solution with the **AWA-C61** inside the container. All containers should be stored where temperatures will not fall under 70 F (21 C) to insure proper product pumpability. **AWA-C61** should never be allowed to freeze or fall below 60 F (15 C) as these conditions can cause the product to be very hard to dispense and can render the product unusable.

PACKAGING:

5-gallon pails, 55-gallon drums, and 275-gallon tote tanks

SHELF LIFE:

6 months in original unopened packaging. Minimum recommended storage temperature is 60 F (15 C).

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