

# DELVO® ESC

*Extended-Set Control technology for plastic concrete and concrete washwater*

## DESCRIPTION:

DELVO® ESC (Extended-Set Control) admixture provides a dispenser-free way of controlling the cement hydration in plastic concrete and washwater. It is a self-contained, dry formulation of DELVO® Stabilizer admixture that is designed to control the hydration of cement in concrete washwater and plastic concrete. DELVO ESC admixture meets ASTM C 494 requirements for Type B (retarding) and Type D (water-reducing and retarding) admixtures. By permitting the formation of a protective barrier around cementitious particles, DELVO ESC admixture prevents portland cement, fly-ash, silica fume, and ground granulated blast-furnace slag concrete mixtures from achieving initial set.

## RECOMMENDED FOR:

- Retarding freshly-batched concrete
- Stabilizing returned plastic concrete and concrete washwater

**The DELVO ESC product can be used as a retarder in freshly-batched concrete, or for stabilizing returned plastic concrete and concrete washwater.** The day after overnight or weekend washwater stabilization, DELVO ESC treated concrete washwater is combined with freshly-batched concrete and sent to the job site. The stabilized concrete washwater that is held in the ready-mix truck drum is used as mix water for the subsequently batched mix. The result is quality, dependable concrete with no waste.

## USAGE INFORMATION:

For overnight stabilization of concrete washwater, use 2 to 3 DELVO ESC pucks combined with 35 to 70 gallons (130 to 265 liters) of fresh water per truck. For weekend stabilization, use 4 to 6 DELVO ESC pucks combined with 35 to 70 gallons (130 to 265 liters) of fresh water per truck. Each puck is equivalent to 16 fluid ounces (470 mL) of liquid DELVO Stabilizer.

When using Type III cement, use 3 to 5 DELVO ESC pucks and 35 to 70 gallons (130 to 265 liters) of fresh water for overnight stabilization, and 5 to 7 DELVO ESC pucks for weekend stabilization of concrete washwater.

If weather conditions or scheduling problems do not permit the use of a ready-mix truck containing stabilized concrete washwater either the next day or over the weekend, the concrete washwater may be restabilized once before being used as mix water the following day.

**NOTE:** When subjected to ambient temperatures below freezing, the stabilized concrete washwater may freeze. If this occurs, add 5 to 25 gallons (20 to 95 liters) of hot water to the truck and mix at agitation speed to melt the frozen material. The transfer of stabilized concrete washwater into one or more ready-mix trucks parked indoors, into a central holding vessel, or the use of water heaters may prevent the freezing of stabilized concrete washwater.

## ADVANTAGES AND BENEFITS:

DELVO ESC technology yields the following benefits:

- Convenient way to save a load of concrete in emergency situations or job delays
- Economical for transporting concrete for long-hauls
- Reduces environmental concerns pertaining to the disposal of concrete washwater and plastic concrete
- Reduces the amount of water needed to clean ready-mix truck drums
- Reduces the labor costs of washing out trucks
- Reduces the need for concrete washwater pits, the resulting wear and tear on front end loaders, and disposal charges
- Acts as a cleansing agent to reduce the buildup on fins, thereby reducing maintenance costs incurred from chipping out hardened concrete
- Concrete containing stabilized washwater will experience strength performance equal to or greater than reference concrete without stabilized washwater
- Reduces material costs by allowing for a cement reduction of between 47 and 94 lb (21 to 43 kg) when a full 9 yd<sup>3</sup> (7 m<sup>3</sup>) load is batched on top of the stabilized concrete washwater (must be verified by performance testing)
- Improves profitability for the ready-mix producer

## STABILIZATION PROCEDURE:

The procedure for overnight/weekend stabilization of concrete washwater is easy, but it is important that each stabilization procedure step is correctly followed.

1. The ready-mix truck must be empty of any returned concrete.
2. Add 35 to 70 gallons (130 to 265 liters) of water to the truck drum.
3. Toss 2 to 3 DELVO ESC pucks into the truck drum with the washwater for overnight stabilization. For weekend stabilization, use 4 to 6 DELVO ESC pucks.
4. Mix at high speed for 1 minute.
5. Reverse the stabilized concrete washwater quickly 4 to 7 times or as recommended to the rear of the drum, creating a wave action for maximum fin cleaning.
6. Return the stabilized concrete washwater to the front of the drum and mix at high speed for 1 minute. During mixing, wash down the fins closest to the point of discharge with water from the truck hose [use no more than 5 gallons (19 liters)]. This will loosen any buildup adhering to these fins.
7. Park the truck for the night or weekend leaving the safety hatch at the 3 or 9 o'clock position.
8. The next day or after a weekend, reduce the water content of freshly-batched concrete by the amount added in steps #2 and #6.

**Please contact your Master Builders sales representative for guidelines pertaining to the use of DELVO ESC technology for extended-set control, long-haul, and sameday stabilization applications.**

## PACKAGING:

DELVO ESC material is supplied in a specially designed 5-1/2 gallon (21 liters) bucket with twist-off lid containing 100 pucks.

## SAFETY PRECAUTION:

If DELVO ESC material comes into contact with eyes, skin or clothing, immediately flush with water (for skin, wash with soap and water) for 15 minutes. Remove contaminated clothing and wash before reuse. Do not take internally. Keep product away from children at all times.

**For additional information on DELVO ESC and DELVO Stabilizer technologies, contact your local Master Builders sales representative.**

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