

RECOVER[®] Hydration stabilizer

ASTM C494 Type D

Product Description



Recover[®] is a ready-to-use aqueous solution of chemical compounds specifically designed to stabilize the hydration of Portland cement concretes. The

ingredients are factory pre-mixed in exact proportions under strict quality control to provide uniform results. One gallon weighs approximately 9.6 lbs (1.15 kg/L).

Recover complies with ASTM C494, Specification for Chemical Admixtures for Concrete, as a Type D water reducing and retarding admixture.

Uses

Recover is used to stabilize mixer wash water and returned or leftover concrete for extended periods, allowing for use of the materials when specified or allowed. It is also used where controlled extended set of concrete is needed. It is the concrete user's responsibility to determine if leftover, returned or extended-set concrete is specified or allowed.

Wash Water

For wash water applications, Recover is used

to eliminate the need to discharge wash water from the mixer. This allows the wash water to be used as mix water in the next batch of concrete produced, and prevents the residual plastic concrete from hardening. Stabilization of up to 96 hours is possible depending on dosage rate.

Returned Concrete

For returned or leftover concrete, Recover is used to prevent plastic concrete from reaching initial set. This allows the concrete to be stored in a plastic state and then used when specified or allowed. The use of this concrete may require the addition of freshly batched concrete and/or an accelerator such as Daracel[®] or PolarSet[®]. Stabilization of concrete for up to 96 hours is possible depending on dosage rate. Use prevents the waste of unused concrete.

Set Time Control

Recover is also used in situations where a controlled set time extension is required. Examples include: extended hauls, large continuous pours or pre-batching of concrete for later use.

Product Advantages

- Eliminates the need to discharge wash water from the mixer
- Prevents the waste of unused concrete
- Provides predictable extended set for continuous placement on mass concrete and tremie projects, or on long hauls to remote sites



Performance

Recover stabilizes the hydration process of Portland cement preventing it from reaching initial set. This stabilization is not permanent and is controlled by dosage rate. For wash water, the Recover treated water is mixed or sprayed in a specific manner to thoroughly coat the interior of the mixer. The water is used as mix water in the next batch of concrete produced, which then scours the unhardened material from the interior of the mixer. Stabilization of returned or leftover concrete with Recover maintains the plasticity of the concrete for the desired storage duration. This stabilized concrete then resumes normal hydration when the Recover dosage effects subside, or when it is activated by the addition of fresh concrete and/or an accelerator. The result can be concrete with normal plastic and hardened properties.

Addition Rates

Addition rates of Recover for wash water range from 6 to 128 fl oz (180 to 3800 mL) per treatment. The amount used will depend on the specific materials involved, mixer type and stabilization period. Addition rates for returned or leftover concrete will range from 3 to 128 fl oz/100 lbs (195 to 8350 mL/100 kg) of cement. The amount used will depend on the specific materials involved, concrete age, temperature conditions and stabilization period. For applications requiring set time extensions well in excess of 4 hours, Recover may be used at addition ranges from 5 to 50 oz/100 lbs (325 to 3260 mL/100 kg) of cement. For use as a traditional ASTM Type D retarder, Recover may be used at addition rates of 2 to 6 oz/100 lbs (130 to 390 mL/100 kg) of cement. Proper dosage rate selection can only be achieved through pretesting. Consult your local Grace admixture representative.

www.graceconstruction.com

North American Customer Service: 1-877-4AD-MIX1 (1-877-423-6491)

Recover, Daracel, PolarSet, Daravair and Darex are registered trademarks and Reach 360 is a trademark of W. R. Grace & Co.–Conn.

We hope the information here will be helpful. It is based on data and knowledge considered to be true and accurate and is offered for the users' consideration, investigation and verification, but we do not warrant the results to be obtained. Please read all statements, recommendations or suggestions in conjunction with our conditions of sale, which apply to all goods supplied by us. No statement, recommendation or suggestion is intended for any use which would infringe any patent or copyright. W. R. Grace & Co.–Conn., 62 Whittemore Avenue, Cambridge, MA 02140. In Canada, Grace Canada, Inc., 294 Clements Road, West, Ajax, Ontario, Canada L1S 3C6.

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Compatibility with Other Admixtures and Batch Sequencing

Recover is compatible with most Grace admixtures as long as they are added separately to the concrete mix, usually through the water holding tank discharge line. In general, it is recommended that Recover be added to the concrete mix near the end of the batch sequence for optimum performance. Different sequencing may be used if local testing shows better performance. Please see Grace Technical Bulletin TB-0110, *Admixture Dispenser Discharge Line Location and Sequencing for Concrete Batching Operations* for further recommendations. Recover should not come into contact with any other admixture before or during the batching process, even if diluted in mix water.

Pretesting of the concrete mix should be performed before use, and as conditions and materials change in order to assure compatibility, and to optimize dosage rates, addition times in the batch sequencing and concrete performance. For concrete that requires air entrainment, the use of an ASTM C260 air-entraining agent (such as Daravair® or Darex® product lines) is recommended to provide suitable air void parameters for freeze-thaw resistance. Please consult your Grace representative for guidance.

Packaging & Handling

Recover is available in bulk, delivered by metered tank trucks and 55 gallon (210 L) drums. Recover will freeze, but will return to full effectiveness after thawing and thorough mechanical agitation.

Dispensing Equipment

A complete line of Grace dispensing equipment is available for Recover. This includes the Reach 360™ System which uses an innovative spray wand technology to simplify wash water procedures.

The logo for GRACE, featuring the word "GRACE" in a bold, green, sans-serif font.