

RECOVER[®]

Hydration stabiliser for concrete reclamation

Product Description

RECOVER[®] is a ready-to-use aqueous solution of chemical compounds specifically designed to stabilise the hydration of portland cement concretes. The ingredients are factory pre-mixed in exact proportions under strict quality control to provide uniform results. One litre weighs approximately 1.15kg ± 0.02kg. Recover satisfies the Japan admixture standard JIS A6240 and is approved by ASTM C 494 as a Type D retarder.

Applications

Recover is used to stabilise cement hydration in: concrete mixer wash water, returned or leftover concrete and slurry water, produced from concrete reclaiming systems. Stabilising with Recover allows for the reuse of these materials when required.

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. Stabilisation 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 reused when required. Reuse requires the addition of freshly batched concrete and also require an accelerator such as Daracel[®] or DaraSet[®]. Stabilisation of concrete for up to 96 hours is possible depending on dosage rate. Use prevents the waste of unused concrete after slurry.

How Recover Works

Recover stabilises the hydration process of portland cement preventing it from reaching initial set. This stabilisation 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. Stabilisation of returned or leftover concrete with Recover maintains the plasticity of the concrete for the desired storage duration. This stabilised 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 is concrete with normal plastic and hardened properties.

Addition Rates

Addition rates of Recover for wash water range from 180 to 3,800mL per treatment. The amount used will depend on the specific materials involved, mixer type, and stabilisation period. Addition rates for returned or leftover concrete will range from 200 to 8,500mL / 100kg of cement. The amount used will depend on the specific materials involved, concrete age, temperature conditions, and stabilisation period. In reclaimer applications, Recover dose is expressed as a percent on water and ranges from 0.075% to 0.30%. Proper dosage rate selection can only be achieved through pretesting. Please consult your local GCP representative for details.

Dispensing Equipment

Please contact your local GCP representative for further information regarding the dispensing equipment for this product.



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.

Slurry Water

In concrete reclaiming systems, coarse and fine aggregates are cleaned and removed from returned concrete, leaving behind a mixture of cement and slurry water. Slurry water is typically used as a portion of batch water for new concrete. Because slurry water is comprised of hydrated and partially hydrated cement particles it can negatively impact properties of concrete including but not limited to, slump retention, time of set, shrinkage and compressive strength. When Recover is added to a concrete reclaiming system it stabilises the hydration of the cement in the slurry water allowing for its use in fresh concrete without the effects normally seen when unstabilised slurry water is used.

Using slurry water stabilised with Recover provides the following benefits:

- Reduces the negative characteristics typically associated with slurry water use: decreased slump retention, variation in air contents, time of set variation, increased water demands, reduced shrinkage and decreased compressive strengths.
- In reclaimer system reduces water use, since trucks are washed many times with the same water.
- Reduces maintenance and downtime normally associated with concrete reclaimers.

Compatibility

Recover is compatible in wash water and concrete with all standard admixture and approved air-entraining admixtures. It is necessary to make a preliminary evaluation of the desired properties and to make product adjustments accordingly.

Packaging

Recover is available in bulk, and 205L drums. It contains no flammable ingredients. Recover will freeze, but will return to full effectiveness after thawing and thorough mechanical agitation.

Health and Safety

See Recover Material Safety Data Sheet or consult GCP Applied Technologies.

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