

CLARENA[®] RC40

Product to treat, and manage and reuse returned concrete

Product Description

CLARENA[®]RC40 is a bagged additive specifically designed to convert plastic concrete to a granular form, that can then be reused to replace the coarse and fine aggregate in concrete or as base/sub-base material, eliminating the need to discard unused or returned concrete.

Product Advantages

- Single component
- Environmentally friendly, non-corrosive, non-reactive (inert), non-regulated, bio-degradable
- Does not require additional equipment
- Does not negatively impact subsequent loads
- Does not adversely react with other chemical admixtures
- Resultant granular material can be used to replace ~10% fine and coarse aggregates in a mix

Uses

CLARENA[®]RC40 is a patent pending additive specifically designed to convert plastic concrete to a granular form. When residual concrete is returned to the plant, the material is often discharged, allowed to set, is then broken up, and eventually crushed and sold or quite often discarded. CLARENA[®]RC40 eliminates all that waste by converting plastic concrete to a granular form that can be easily worked and reused. The CLARENA[®]RC40 additive is dry, single component and can easily be added to a ready mix truck by hand.

Addition Rates

For best results, washing the rear of the drum should be limited to no more than 2 gal/yd³ (9.9 L/m³) of residual concrete. Under these circumstances, the typical dosage rate is approximately 40 lbs/yd³ (23.7 kg/m³) of residual concrete. If the concrete has had sufficient water added to attain a slump of 10 inches (250 mm) or greater, an increase in the dosage of approximately 10 lbs/yd³ (5.9 kg/m³) may be required.

Treating loads of concrete that contain a maximum aggregate size of 3/8 inches (9.5 mm) or less, the dose may need to be slightly increased.

If the treated concrete will not be worked/recombined for more than 24 hours, the dosage rate should be increased by 10 lb/yd³ (5.9 kg/m³) to ensure the granules will not stick together too strongly during that time.

How to use:

Before treating concrete:

Minimize the amount of water added to the residual concrete by reducing the amount of time used to rinse the blades and top of drum after discharging the plastic concrete. Try to avoid adding water to the mix prior to treatment. If early set is a concern a set retarder such as RECOVER[®] can be used at the recommended dosage rates (refer to the RECOVER[®] data sheet). If the water slump is 10 inches (250 mm) or greater increase the dosage rate by approximately 10 lbs/yd³ (5.9 kg/m³).

How to treat concrete:

1. Determine the volume of concrete to be treated
2. While rotating the drum slowly (3-5 rpm) add 40 lbs/yd³ (23.7 kg/m³) of CLARENA[®] RC40
3. Mix hard (10-15 rpm or greater) for at least 3 minutes
4. Discharge material into a pile (using a discharge speed of 8-10 rpm)
5. Use a front loader to break up the pile within 24 hours (preferably around time of initial set).



To facilitate management of the pile, the front loader can be used to spread the pile after discharge.

To use treated concrete to replace fine and coarse aggregate, replace equal amounts of fine and coarse aggregate. For example, 200 lbs/yd³ (118.6 kg/m³) of treated material would replace 100 lbs/yd³ (59.3 kg/m³) of fine aggregate and 100 lbs/yd³ (59.3 kg/m³) of coarse aggregate. The replacement values are independent of the dosage rate used to treat returned concrete with CLARENA[®] RC40.

Dosing

No dosing equipment required. If desired there is commercially available dispensing equipment that allows the material to be added to the truck remotely. Contact your local GCP representative for more details.

Compatibility

There are no compatibility issues associated with the use of CLARENA[®] RC40 to treat ready mix concrete containing chemical admixtures. Also, there are no compatibility issues associated with the use of concrete treated with CLARENA[®] RC40 used to replace fine and coarse aggregate in concrete that contains chemical admixtures.

Packaging & Storage

CLARENA[®] RC40 comes in 20 lb (9.07 kg) bales.

CLARENA®RC40 bales should preferably be stored in a dry place. Bales are packaged in plastic and can be stored outside if necessary, provided the packaging is not damaged, exposing material to the elements. The material does not have a shelf life provided it remains dry. If the material does get wet it will agglomerate making it difficult to disperse. If the material is allowed to dry, it can be used but dispersion will not be as efficient and the dosage will have to be increased above the recommended dosage.

Safety and Handling

Read and understand the product label and Safety Data Sheet (SDS). All users should acquaint themselves with this information prior to working with the product and follow the precautionary statements.

SDSs can be obtained by contacting your local GCP representative or office, from our web site at gcpat.com, or by calling GCP at +1-866-353-3726.

gcpat.com | North America Customer Service: 1 877-4AD-MIX1 (1 877-423-6491)

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 consideration, investigation and verification by the user, but we do not warrant the results to be obtained. Please read all statements, recommendations, and 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 that would infringe any patent, copyright, or other third party right.

GCP APPLIED TECHNOLOGIES and CLARENA are trademarks, which may be registered in the United States and/or other countries, of GCP Applied Technologies Inc. This trademark list has been compiled using available published information as of the publication date and may not accurately reflect current trademark ownership or status.

© Copyright 2018 GCP Applied Technologies Inc. All rights reserved.

GCP Applied Technologies Inc., 2325 Lakeview Parkway, Alpharetta, GA 30009, USA

GCP Canada, Inc., 294 Clements Road, West, Ajax, Ontario, Canada L1S 3C6

This document is only current as of the last updated date stated below and is valid only for use in the United States. It is important that you always refer to the currently available information at the URL below to provide the most current product information at the time of use. Additional literature such as Contractor Manuals, Technical Bulletins, Detail Drawings and detailing recommendations and other relevant documents are also available on www.gcpat.com. Information found on other websites must not be relied upon, as they may not be up-to-date or applicable to the conditions in your location and we do not accept any responsibility for their content. If there are any conflicts or if you need more information, please contact GCP Customer Service.

Last Updated: 2022-05-06

gcpat.com/solutions/products/clarena-rc-returned-concrete-management-solutions/clarena-rc40