

OPTEVA™ HC 285

Cement Additive for Performance Enhancement

Product Description

OPTEVA™ HC 285 is a chemical additive used as a cement constituent (European standard EN 197, point 5.5) to improve the manufacture and the properties of the cements. OPTEVA™ HC 285 is an aqueous solution of selected raw materials to suit the requirements of the cement manufacture.

Physical Properties

OPTEVA™ HC 285	
Appearance	Brown liquid
Density (g/l)	1080-1100
pH	5,0-7,0

Recommended Addition Rate

According to GCP Applied Technologies experience the addition rate of OPTEVA™ HC 285 is typically in the range of 400-600 g/t of treated cement. However the optimum addition rate of OPTEVA™ HC 285 depends on the characteristics of the material and the grinding circuit and is normally assessed through industrial tests. GCP personnel are available for assistance. Deviation from the optimum cannot guarantee the expected results and could have an impact on the cement characteristics. Overdosing can lead to a reduction in mill retention time and a possible loss of grinding efficiency, together with “mill flushing”, excessive flowability, as well as undesired modifications of cement properties.

Advantages

- Reduced tendency of re-agglomeration
- Improved flowability
- Lower pack set tendency
- Increased mill output
- Compressive strength increases at medium to later ages

Benefits

OPTEVA™ HC 285 is a grinding aid for cement, which reduces the tendency of re-agglomeration of the fine particles, formed during the comminution process.

OPTEVA™ HC 285 permits improvements of the flowability of the finished cement, of the efficiency of the mill and separator and thus increases the production rate with a corresponding reduction in grinding energy consumption. Cements produced with OPTEVA™ HC 285 have a lower packset tendency and hence can provide advantages during loading and unloading operations.

OPTEVA™ HC 285 improves the particle size distribution and activates the hydration kinetics, and thus increases the strength of the treated cement.

The formulation of OPTEVA™ HC 285 is based on selected alkanolamines and other raw materials, and permits increases of the compressive strength at the initial and medium to later ages.

The resulting enhanced performance can be used to meet specific market needs or, if desired, to reduce cement fineness and lower unit production costs, or to reduce the clinker factor, by using increased levels of supplementary cementitious material, while retaining the previous cement performance characteristics.

Certification

OPTEVA™ HC 285 meets the requirements of EN 197.

Typical Applications

OPTEVA™ HC 285 can be used for the grinding of most cements in all types of grinding systems, including those with ball mills, open and closed circuit, roll press, horizontal roller and vertical roller mills.

Main applications are:

- Portland cements
- Portland blended cements

OPTEVA™ HC 285 has particular benefit in the production of blended cements because of its good grinding efficiency and improvement to all ages strength.

How to Use

OPTEVA™ HC 285 should be added on to the feed belt or injected pure or diluted (also with the cooling water) into the mill. For an accurate proportioning of OPTEVA™ HC 285 a volumetric metering pump is suitable. GCP personnel are available for assistance.

Packaging and Storage

OPTEVA™ HC 285 is supplied in 205 litre drums, in 1000 litre plastic containers or bulk.

OPTEVA™ HC 285 does not require particular precaution for storage. However it should be protected from freezing or excessive hot conditions. For tanks and containers placed outside in cold conditions a heating system or a re-mixing device is recommended. It is also advisable to insulate exposed pipelines.

Shelf life is at least 12 months if stored in sealed manufacturer's containers.

Handling Precautions

OPTEVA™ HC 285 does not require particular precaution for health and safety. For further advice please read the Material Safety Data Sheet. Accidental release or spillage to be absorbed with an inert, non combustible material, such as sand or sawdust. Tanks and container can be cleaned with water.

REACH

All of our products sold in the EU comply with REACH obligations. Our customers, as manufacturers or downstream users may sell their products utilizing GCP Applied Technologies products with confidence that the substances in them may be placed on the market in compliance with REACH.

gcpat.uk | Manufacturing and Technical Service Contacts: Tel: +44 (0)1925 855330

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, OPTEVA & TAVERO are trademarks, which may be registered in the United States and/or other countries. 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 2019 GCP Applied Technologies

OPTEVA HC 285-GB (Widnes) - 1220sm

This document is only current as of the last updated date stated below and is valid only for use in the United Kingdom. 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.uk. 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: 2025-05-13

gcpat.uk/solutions/products/opteva-quality-improvers/opteva-hc-285