

cor-Stable lime

cor-Stable used to prepare 80,000 m³ of earth ready for building a secondary school and sports complex in Scotland

Background

As well as providing lime for steelmaking applications, Tata Steel manufactures cor-Stable lime at its Shapfell site in Cumbria. This is a specialist fine lime product used to treat soil. Once lime is mixed in the soil, two significant effects take place. The clay particles in the soil react with the lime to strengthen it, and improve its load bearing capability. The soil is dried, which helps it to compact. The resultant product provides a sound construction material upon which building foundations can be laid. By treating soil with lime in this way, a contractor can significantly reduce the amount of materials which need to leave a site, and also the amount of materials brought to a site, providing both economic and environmental benefits.

The lime is certified to EN 459-1, CE marked to CL90-Q (R5, Psv), representing the highest chemical and reactivity specifications available in ground stabilisation lime. This allows cor-Stable to be used in a wide range of applications and soil types and the high lime content is able to treat the most difficult of soils.

Benefits

Customers benefit from the enhanced properties of Tata Steel's cor-Stable lime because the optimization of fines in the product reduces the time required to mix the lime and soil and therefore money spent on machinery hire is reduced. The high reactivity lime, which arises from a combination of very pure limestone feed-stone and ideal calcination conditions, provides rapid drying of the soil, optimizing the lime yield and therefore value in use.

Shapfell is located adjacent to the M6 motorway in Cumbria, and as well as road deliveries is able to supply lime directly on rail with its own connection to the main West Coast Railway Line. Both options provide a rapid and cost effective means of delivery. Our responsive service and 24-7 operation means cor-Stable can be supplied at short notice and in flexible quantities.

In this example, cor-Stable has been supplied to a secondary high school and sports complex development in Jedburgh. Some 80,000 m³ of soil has been treated with around 2% lime (this varies depending upon the properties of the soil before treatment), in a development covering an area of 8 hectare metres. The ground works have taken place during the summer of 2018. Tata Steel have supplied all of the 800T used in the project.

The site's manager said "Tata Steel have been a great company to work with, their haulier always delivers on time and at short notice, and we have had no issues with quality. RJT Excavations and Tata Steel have a long and successful relationship, we've used their lime all over Scotland."

Product specification

Typical Size Analysis: +3.15mm - 3% max. (typical size analysis is available on request).

Bulk Density: Approximately 1,100kg/m³

Chemical parameters:

Available CaO – 80% min. – typical 89%

Total CaO + MgO – 90% min. – typical 95%

Loss on ignition – 4.0% max. – typical 2%

SO₂ – 2.0% max. – typical 0.15%

Reactivity – 60°C in 10 minutes max. (typical 60°C in 2-3 minutes)

As specified in BS EN 459-1:2015, a higher loss on ignition is permitted if the requirements for other chemical parameters in this table are met

For more information:

T: +44 (0)1931 717120

F: +44 (0) 1931 716566

E: shapfell@tatasteelurope.com



Tata Steel

Shapfell

Cumbria

CA10 3QG

United Kingdom

E: shapfell@tatasteelurope.com

www.tatasteelurope.com/shapfell

IN0117:EN:PDF:1118

www.tatasteelurope.com

While care has been taken to ensure that the information contained in this publication is accurate, neither Tata Steel, nor its subsidiaries, accept responsibility or liability for errors or for information which is found to be misleading.

Before using products or services supplied or manufactured by Tata Steel and its subsidiaries, customers should satisfy themselves as to their suitability.

Copyright 2019
Tata Steel Europe Limited