



# DURAFORCE K

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## INSTALLATION GUIDELINES

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## OUTLINE

This installation guideline is for typical coastal erosion and scour protection applications. It includes storage and handling, and installation of DuraForce K material. This guide is generic in nature and would be superseded by any project specific installation guidance

## APPLICATIONS

This installation guide is applicable for DuraForce K installation applications including:

- Coastal and seashore protection
- Spillways
- Protection layers



## STORAGE AND HANDLING

When the DuraForce K rolls are delivered to site it is recommended to check the type and grade match the requirements of the project documents. All DuraForce K rolls should be marked clearly and in good condition before being accepted on site.

DuraForce K is transported and stored in rolls. These rolls can be stacked on top of each other but must not exceed seven rolls high. If stored on the ground, place a tarpaulin down first to help protect the rolls from dirt and wrap over the top of the rolls to keep them dry, and easy to handle\*. For stacked rolls extra care is required to ensure the stack is stable and the rolls cannot fall or roll.

DuraForce K rolls are supplied in easy to handle rolls and can typically be installed manually without any machinery. Check the weight of the roll from the label and ensure all best practice as regards OH&S is followed.

If you have any questions regarding storage and handling of DuraForce K, please contact your Cirtex® representative.





# INSTALLATION

## GRADE SELECTION

DuraForce K is available in 4 different strength grades and it is important that you select the one that meets the project specification.

As a rule of thumb, the larger the rock being placed on the DuraForce K, the higher the strength grade required. Contact Cirtex if your specification is unclear or you have any questions regarding this.

## PREPARATION

The receiving area should be adequately prepared prior to placement of DuraForce K including:

Filling in of large voids to create a 'reasonably' even surface and ensure the DuraForce K will be sufficiently supported prior to rock placement.

Removal/covering of sharp objects such as rocks, roots and debris that could pierce the DuraForce K.

When required by the design, excavation of anchor trench at toe/crest of slope of a minimum of 500x500mm.

## APPLICATION

Depending on the site conditions, DuraForce K can be either placed by hand in large sheets or applied using a spreader bar inserted through the roll core. A spreader bar typically consists of a strong steel tube with a length of suitable chain strung between (which can then be lifted by an excavator).

Adjacent sections of DuraForce K should be overlapped by a minimum of 300mm. In some special cases the engineer may require a wider overlap or a sewn join.

To cut DuraForce K to suit the site, this can be done using a suitable sharp knife or electric cutting tool. Contact Cirtex for more information regarding the current cutting tool available.

**SLOPES:** Where possible, we recommend applying a single continuous length down a slope to prevent undermining. However, if this is not possible the DuraForce K must be overlapped by a minimum of 1m and laid in a 'shingle style' with the upper piece being placed over top of the lower section.

As an extra precaution on sites that are subject to high wind, to secure the DuraForce K once laid we recommend to either pin down using Cirtex Ground Staples to prevent it from shifting or placing some form of weights at regular intervals (e.g. sand bags, rocks, tyres)

Once the DuraForce K has been laid, we recommend covering it with rock within 14 days of initial placement.

## ROCK PLACEMENT

In accordance with the project specification, carefully place the suitable rock size/thickness onto the DuraForce K. Where possible, we recommend using a clamp bucket to minimise the drop height and therefore maximising the strength retained of the DuraForce K.



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