

# Gabion Stone Fill Specification

## General

Gabions baskets are generally (but not exclusively) filled with graded stone. The density of gabions is based on 60% of the specific weight of the rock fill.

Care must be taken therefore to emphasise to the contractor that all attempts must be made to minimise large voids during filling. If the correct size of stone is used then this problem is easily overcome. For best results, particularly when hand facing the basket, angular stone, such as Granite or limestone are favoured. Round stones like cobbles are disadvised.

## Specification

The rock fill should be graded so as to achieve an interlock and maximise the density, obviously it should not be smaller than the mesh aperture.

For Welded mesh gabions the aperture is 75mm x 75mm and for woven units it is nominally 80 x 100mm. Therefore in both cases the correct grading should be in accordance with Highways Agency Specification requirements, clause 6.2.6 Type 6G, Table 101, 100 – 200mm. It should also conform to BS5390 for hardness, crush strength, resistance to weathering and frost susceptibility.

It is normally accepted to have 6% by weight less than 100mm. If it is possible to tighten the grading to 100- 150mm this will improve the filling of the gabions. However, provided the basket face is well placed, stone of a smaller size can be use as a back fill (down to 50mm, provided it cannot escape).

Typical nominal rock densities for gabion fill are listed below: To allow contractors to be able to estimate the weight of stone required for a gabion structure it is usual to quote 1.6 tonnes per cu. m .

Steensoort	Gewicht in kN per m <sup>3</sup>
Granite	17 kN / m <sup>3</sup>
Limestone	16 kN / m <sup>3</sup>
Sandstone (only hard and durable)	16 kN / m <sup>3</sup>
Crushed concrete	15 kN / m <sup>3</sup>
Granular fill (bastions only)	17 kN / m <sup>3</sup>



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**Possibilities**

