



**GABION**  
**BASKETS**

*we box rocks!*

## **Gabion Geotextile Specifications**

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| PROPERTIES                |                      | UNITS         | STANDARD GRADES |     |     |     |      |      |      | TEST METHOD        |
|---------------------------|----------------------|---------------|-----------------|-----|-----|-----|------|------|------|--------------------|
|                           |                      |               | A1              | A2  | A3  | A4  | A5   | A6   | A7   |                    |
| GRAB STRENGTH             | Min Strength         | N             | 450             | 480 | 665 | 850 | 1045 | 1395 | 2100 | ASTM D4632-86      |
|                           | Elongation           | %             | 70 - 95         |     |     |     |      |      |      |                    |
| TRAPEZOIDAL TEAR STRENGTH | Min Strength         | N             | 205             | 245 | 330 | 375 | 480  | 645  | 1050 | ASTM D4533-85      |
| PENETRATION LOAD          | Penetration Load     | kN            | 1.5             | 1.7 | 2.1 | 2.5 | 3.6  | 4.5  | 6.5  | SABS 0221-88       |
| BURST STRENGTH            |                      | MPa           | 1.3             | 1.5 | 2.1 | 2.5 | 3.0  | 4.2  | 6.3  | ASTM D4533-86      |
| NORMAL PERMEABILITY       | $1.0 \times 10^{-3}$ | m/s           | 3.9             | 4.3 | 4.5 | 4.9 | 5.4  | 5.9  | 4.8  | SABS 0221-88       |
| TRANSMISSIVE THROUGHFLOW  | under 20 kPa         | L/hr          | 26              | 32  | 37  | 40  | 50   | 59   | 80   | ASTM D4716         |
| POROSITY                  | under 2 kPa          | %             | 93              | 93  | 93  | 93  | 93   | 92   | 90   | GTS                |
| PORE SIZE                 | $O_{95W}$            | $\mu\text{m}$ | 240             | 225 | 205 | 190 | 165  | 145  | 100  | Franzius Institute |
|                           | $O_{95H}$            | $\mu\text{m}$ | 195             | 185 | 170 | 155 | 125  | 100  | 70   | NF.G 38017         |

### GEOTEXTILE SELECTION

The table below provides an indication of the geotextile grade required for mechanical separation of soil layers, based on international standards and experience within South Africa. Engineering judgement should be used when selecting a geotextile for separation applications.

| $D_{85}$ of Fill Material (mm) | Geotextile Grade          |                           |
|--------------------------------|---------------------------|---------------------------|
|                                | Subgrade Strength CBR < 3 | Subgrade Strength CBR > 3 |
| < 37.5                         | A 5                       | A 4                       |
| < 75                           | A 6                       | A 5                       |
| < 200                          | A 7                       | A 6                       |
| < 400                          | A10                       | A 7                       |

Note: This table applies only to geotextiles with a grab elongation of greater than 50%