

**FlexMesh™**

FlexMesh™ is manufactured from hexagonal woven wire Mesh Type 80 commonly referred to as double twist mesh as per SANS 1580:2005 (Table 1). A transverse rod is woven into the mesh at 160 mm intervals. One side of the wire mesh panel is lined with a pre-attached geotextile for separation. The geotextile is manufactured from continuous polyester filaments by the double needle-punching process.

FlexMesh™ is typically used for beach front vehicular deployment, emergency roadways, for access across poor areas of subgrade support and for temporary or permanent roadway stabilisation.

The wire used in the manufacture of FlexMesh™ is heavily zinc coated according to SANS 675:1997. The properties for the mesh and wire are given in Tables 1 and 2. The characteristics of the geotextile are shown in Table 4.

FlexMesh™ is manufactured and supplied in lengths as shown in Table 3. When specifying FlexMesh™ in the tender documents or bill of quantities, please refer to Table 5.

**Installation**

FlexMesh™ rolls can be joined in length by overlapping the ends in the direction of the traffic flow. They may also be connected to one another using steel Spenax rings to provide for permanent continuity and additional security. A Spenax tools (Figure 3) and stainless steel rings (Figure 4A) having the following specifications are available from our offices:

- diameter: 3mm
- tensile strength: 156-178 kg/mm<sup>2</sup>

Spacing of the rings or loops must not exceed that shown in Figure 4B.

The use of ground staples can also be used for staking the FlexMesh™ to the ground where two continuous rolls connect.

For further information on the installation of FlexMesh™ please refer to the [Installation Guidelines](#) for FlexMesh™.

**Wire**

All tests on wire are performed prior to manufacturing the mesh.

1. **Tensile strength:** The wire used for the manufacture of the gabions has a tensile strength between 350-575 N/mm<sup>2</sup> according to SANS 675:1997.
2. **Elongation:** Elongation is not be less than 10% in accordance with EN 10223-3. Tests are carried out on a sample at least 25 cm long.
3. **Adhesion of zinc:** The adhesion of the zinc coating to the wire is such that, when the wire is wrapped six turns around a mandrel having four times the diameter of the wire, it does not flake or crack when rubbed with the bare fingers, in accordance with SANS 675:1997.
4. **Ductility:** The ductility of the zinc-coated wire is such that when the wire is wrapped at least eight times around a wire having the same diameter of the test specimen at a rate not exceeding 15 turns per minute and then unwrapped at the same rate, it does not show any sign of fracture of the underlying steel wire in accordance with SANS 675:1997.

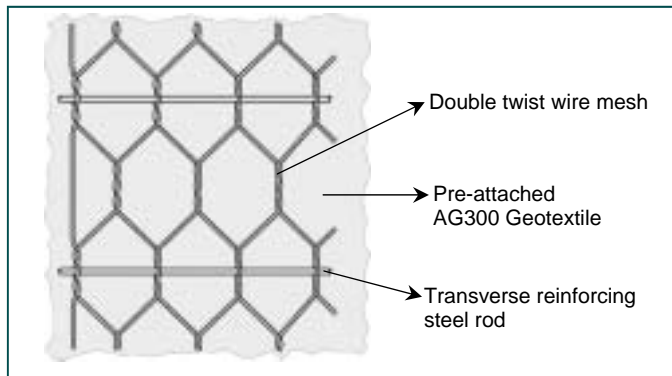



Figure 1

STANDARD MESH-WIRE			
Mesh Type 80	b	Tolerance (mm)	OD Wire Ø (mm)
Galvanised	80	-4 +10	3,0



**MESH TOLERANCE**  
The tolerance on the opening of mesh "b" being the distance between the axis of two consecutive twists according to SANS 1580:2005.

Table 1

PROPERTIES OF WIRE				
Use	Units	Mesh	Selvedge	Transverse Steel Rod
Wire Galvanised**	Ø mm	3,0	3,9	4,9
Wire Tolerance*	Ø mm	±0,8	±0,1	±0,1
Quantity of zinc*	g/m <sup>2</sup>	275	290	290
Tensile strength*	N/mm <sup>2</sup>	350-575		

\* According to SANS 675:1997

\*\* According to SANS 1580:2005 and SANS 675:1997

Table 2



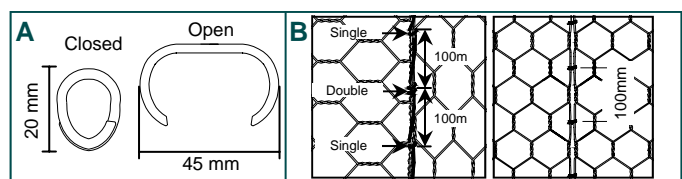
Figure 2

FLEXMESH™ SIZES		
Designation	Roll Length (m)	Roll Width (m)
Mesh Type 80	25 or 50	3,5
Binding/Fixing : Spenax rings sold separately.		
Tolerance : Length : ±3%; Width : ±b		
Sold in full rolls only.		

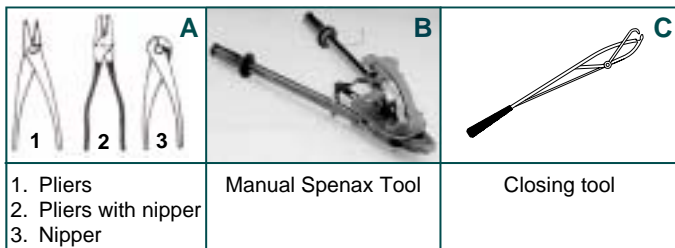
**Table 3**

CHARACTERISTICS OF GEOTEXTILE		
Geotextile Designation	Minimum Energy Absorption (kJ/m)	Minimum CBR Strength (kN)
AG 300	10	3,5

**Table 4**



**Figure 4**



**Figure 3**



**Figure 5**

BILL OF QUANTITIES					
Item No.	Description	Unit	Quantity	Rate	Amount (R)
1	FLEXMESH™ (Double twist hexagonal wire, Mesh Type 80 to SANS 1580:2005). (Including material and delivery).				
1.1	3,05 mm mesh wire, transversely reinforced with 4,9 mm steel rods and all to Class A Galvanised. Pre-attached double needle-punched, non-woven geotextile with continuous polyester filaments. AG 300 with minimum energy absorption of 10kJ/m. Length x Width	m <sup>2</sup>			
2	Installation of FlexMesh™ (Including unrolling, placing and fixing).	m <sup>2</sup>			

**Table 5**