



TERRAQUA Inc.

**ROCKFALL AND SAFETY
NETTING (Galvanized)**

For Loose Rock Face

All Rockfall Netting is manufactured
According to ASTM A-641 and
ASTM 975-20 guidelines for Double
Twisted Hexagonal mesh

MATERIALS:

The galvanized rockfall protection netting shall be of non-raveling construction and consist of a uniform double twisted hexagonal mesh of hot dipped galvanized steel wire having a diameter of 3.0mm (0.118 inches) after galvanization. The steel wire used shall be galvanized prior to weaving into mesh. All wire used shall equal or exceed Federal Specification QQ-W-461H, Finish 5, Class 3 in accordance with current ASTM A-641, Class 3, Soft Temper. The weight of zinc coating shall be as determined by ASTM test designation A-90. Mesh openings shall be hexagonal in shape and uniform in size measuring not more than 8 x 10 cm (3 ¼” inches x 4 ½” inches). The mesh wire shall be 3.0mm (0.118 inches). Selvedge wire shall be of heavier gauge than the mesh wire with a diameter of 3.8mm (0.150 inches). Lacing and connecting wire shall meet the same specification as the wire used for the netting except that its diameter shall be of 2.2 mm (0.087 inches) after galvanization.

The use of alternate wire fasteners shall be permitted in lieu of tie wire provided the alternate fasteners meets ASTM A-764 and have a closed position tensile strength of 3033 Newton (700 lb.) while remaining in a positive locked closed condition. The inside opening area shall be 4.84 square cm (.75 square inches). Alternative fasteners are an approved alternate to lacing material

All of the above wire diameters are subject to a tolerance limit of +/- 0.004 inches in accordance with ASTM A-641.

DIMENSIONS:

Netting is supplied in rolls of the following dimensions:

Width: .91m to 4.52m (3 ft. – 15 ft.)
Length: 91.44m maximum (300 ft.)



Terra Aqua Unit Standard Sizes:

Roll unit size	Square Yards
6'x150'	100
12'x150'	200
15'x150'	250
6'x300'	200
12'x300'	400
15'x300'	500

- These dimensions are subject to 10.16 cm (4 inches) for both width and length. In order to simplify the installation procedure, the total length of a roll is recommended to be multiple of the height of the slope.

Minimum Strength requirements of Terra Aqua Double Twisted Mesh

Test Description	Galvanized/Galfan	Pvc Coated
Tensile strength of wire		
mesh parallel to twist	3500 lbs/ft	2900 lbs/ft
Tensile strength of wire		
mesh perpendicular to twist	1800 lbs/ft	1400 lbs/ft
Connection to selvages	1400 lbs/ft	1200 lbs/ft
Panel to Panel	1400 lbs/ft	1200 lbs/ft
Punch strength of mesh	6000 lbs/ft	5300 lbs/ft

Material data:

- diameter of mesh wire: 0.120 inches
- diameter of selvedge wire: 0.153 inches
- diameter of lacing wire: 0.091 inches
- coating of wire: finish 5 class 3 zinc coating- ASTM A-641 tested in accordance with ASTM A370-92.
- tensile of wire: soft temper in accordance with ASTM A641-92
- weight of zinc coating of wire: shall be determined by ASTM A-90
- wire diameter of 0.120 inches shall have a weight of zinc coating of: 0.85 oz/sf
- wire diameter of 0.153 inches shall have a weight of zinc coating of: 0.90 oz/sf
- wire diameter of 0.091 inches shall have a weight of zinc coating of: 0.80 oz/sf
- grade of zinc coating of wire: high grade or special high grade in accordance with ASTM B-6, Table 1
- uniformity of coating: shall be determined by ASTM A-239
- Elongation: not less than 12% in accordance with ASTM A370-92.
- Mesh Openings: 8cm x 10cm (3.25" x 4.5")

All of the above wire diameters are subject to a tolerance limit of 0.004 in accordance with ASTM A-641.

INSTALLATION:

- 1.) The edges of the panels shall be wired or fastened to each other to form a continuous covering. The lacing wire shall be tightly looped around every other mesh opening along the edges in such a manner that single and double loops are alternated.
 - The alternative wire fastener shall be applied at approximately 12 inch (30.5 cm) intervals on both vertical and horizontal lap on each side of the overlap.
- 2.) In the curve stretches of the road, and in order to avoid weakening the protective structure, the net shall not be cut to shape the curve and overlaps of the netting shall be allowed. The same binding operation described in paragraph 1 shall be done where these overlaps occur.
- 3.) On the slopes where a wire cable/rope grid system is designed, tie wires used for lacing the wire mesh to the wire rope shall be galvanized 2.7mm (0.106 inches) and shall be laced horizontally and vertically in accordance with the details.
- 4.) Alternative wire fasteners shall be allowed in lieu of the galvanized 2.7mm (0.106 inches) tie wire when spaced at 30.5 cm (12 inches). The wire rope used to establish the grid shall be .95 cm to 1.9 cm (3/8 inches to 3/4 inches), as directed by the engineer.

ASTM A975-20

Proudly Made in the USA

Plant location:
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