# Welded mesh fabric reinforcement

Welded Mesh Fabric Reinforcement is manufactured using cold-rolled deformed wire, electrically resistance welded at the intersections of the longitudinal and transverse wires at the required mesh spacing with minimal loss of strength and cross-sectional area.

Welded Mesh Fabric is specified and manufactured according to SANS 1024 Standard Specifications making for easy site identification, quality control and management.

Welded Mesh Fabric is generally used in surface beds (concrete floor slabs on fill) and road pavements, mesh can also be used in suspended floor slabs, concrete retaining walls, box culverts and drains, precast stadium seating, tilt-up wall panels to name a few.



### **Product Features**

- Using welded mesh drastically speeds up the construction process
- Welded mesh is available in wide range of wire diameters each suited for a particular reinforcing design application
- Depending on job requirements welded mesh can be designed either in flat sheets, rolls or bent to suit
- The deformed wire used in the production of welded mesh improves concrete adhesion. The wire has a minimum proof stress of 485MPa and a tensile strength of 510MPa as per BS4482 Standard Specification requirements
- Welded mesh can be used at higher stresses than that of high tensile rebar, resulting in an 8% overall material saving
- Due to its rigid nature, concrete cover can be controlled more accurately on site
- Welded mesh is manufactured in strict accordance to SANS1024 Standard Specifications as well as to international standard specifications on request
- Where there is a significant amount of repetition, conventional bar reinforcement can be substituted with pre-manufactured designed mesh resulting in easier controls and speed of installation.

	Fabric	Mesh size Nominal Pitch of Wires		Wire Sizes		Cross Sectio Wi	onal Area/m dth	Nominal Mass/m2			
	Ref No	Maim (mm)	Cross (mm)	Main (mm)	Cross (mm)	Main (mm)	Cross (mm)	kg	Supplied in		
Square mesh fabric	888	200	200	12	12	566	566	8.88			
	746	200	200	11	11	475	475	7.46	Sheets only 6m x 2.4m		
	617	200	200	10	10	393	393	6.17			
	500	200	200	9	9	318	318	5.00			
	395	200	200	8	8	251	251	3.95			
	311	200	200	7.1	7.1	198	198	3.11			
	245	200	200	6.3	6.3	156	156	2.45			
	193	200	200	5.6	5.6	123	123	1.93	Sheets or rolls		
	100	200	200	4.0	4.0	63	63	1.00			
Design mesh fabric	1085	100	200	12	8	1131	251	10.85			
	943	100	200	11	8	951	251	9.43	Sheets only 6m x 2.4m		
	772	100	200	10	7.1	786	198	7.72			
	655	100	200	9	7.1	636	198	6.55			
	517	100	200	8	6.3	503	156	5.17			
	433	100	200	7.1	6.3	396	156	4.33			
	341	100	200	6.3	5.6	312	123	3.41			
	289	100	200	5.6	5.6	246	123	289			
Longitudinal mesh fabric	278	100	300	6.3	4.0	312	42	2.78	Sheets 6m x 2.4m or rolls 60m x 2.4m		
	226	100	W300	5.6	4.0	246	42	2.26			
	133	100	300	4.0	4.0	126	42	1.33			
Special mesh	200	100	100	4.0	4.0	126	126	2.00			
	156	100	100	3.55	3.55	99	99	1.56			

#### Installing Welded Mesh Fabric Reinforcement on site

Lapping of Welded Mesh

- It is generally recommended that the following formula be used when calculating required lap lengths applicable to the various mesh specifications
- Formula: 25 x bar diameter + 15mm or 300mm whichever the greater

#### Laying of Welded Mesh

- Special attention must be given to ensure that the mesh remains correctly positioned at the prescribed level of cover during a concrete pour. This will determine the ultimate effectiveness of the reinforcement
- Concrete spacer blocks, plastic spacers and stools should be used liberally when placing mesh in order to ensure that the mesh is sufficiently supported to maintain its correct positioning and integrity in the concrete slab.



### Structural fabric reinforcement design data

Cross sectional areas at various spacing mm<sup>2</sup>/m Mass at various spacing kg/m<sup>2</sup>

Diam	Area	Mass		Wire	Spa	Cing	(mm)							
Mm	Mm2	Kg/m	50	75	100	125	150	175	200	225	250	275	300	
12	113.11		2262	1508	1131	905	754	646	566	503	452	411	377	12
		0.888	17.76	11.84	8.88	7.10	5.92	5.07	4.44	3.95	3.55	3.23	2.96	
11	95.05		1901	1267	950	760	634	543	475	422	380	346	317	11
		0.746	14.92	9.95	7.46	5.97	4.97	4.26	3.73	3.32	2.98	2.71	2.49	
	78.55		1571	1047	786	628	524	449	393	349	314	286	262	10
		0.617	12.34	8.23	6.17	4.94	4.11	3.53	3.09	2.74	2.47	2.24	2.06	
	63.63		1273	848	636	509	424	364	318	283	255	231	212	9
		0.500	10.00	6.67	5.00	4.00	3.33	2.86	2.50	2.22	2.00	1.82	1.67	
	50.27		1005	670	503	402	335	287	251	223	201	183	168	8
		0.395	7.90	5.27	3.95	3.16	2.63	2.26	1.98	1.76	1.58	1.44	1.32	
7.1	39.60		792	528	396	317	264	226	198	176	158	144	132	7.1
		0.311	6.22	4.15	3.11	2.49	2.07	1.78	1.56	1.38	1.24	1.13	1.04	
6.3	31.18		624	416	312	249	208	178	156	139	125	113	104	6.3
		0.245	4.90	3.27	2.45	1.96	1.63	1.40	1.23	1.09	0.98	0.89	0.82	
5.6	24.63		493	328	246	197	164	141	123	109	99	90	82	5.6
		0.193	3.86	2.57	1.93	1.54	1.29	1.10	0.97	0.86	0.77	0.70	0.64	
4	12.57		251	168	126	101	84	72	63	56	50	46	42	4
		0.100	2.00	1.33	1.00	0.80	0.67	0.57	0.50	0.44	0.40	0.36	0.33	





## Hard drawn wire

Hard Drawn Wire is manufactured from low carbon wire rod through a cold-rolled reduction process that increases hardness, tensile strength, proof stress and at the same time rolling a deformed pattern onto the wire.

Hard Drawn Wire is produced to BS4482 standard specifications where the required ultimate tensile strength (UTS) is 510MPa with a minimum proof stress of 485MPa.

Hard Drawn Wire is available in strapped coils or supplied straightened and cut to length.

Coil weights: 500kg; 1200kg; 2000kg (Approximate) Bar lengths: 2.4m; 6m; 12m and 13m

Special lengths can be cut to suit customer requirements





#### **Standard Specifications**

Wire Diameters							
Diameter/mm	Mass/meter						
5.6	0.193						
6.3	0.245						
7.1	0.311						
8.0	0.395						
9.0	0.500						
10.0	0.617						
11.0	0.746						
12.0	0.888						

For further information, please contact RMS Head Office