

Engineered Wire Products, Inc.

tech notes⁶

High yield welded wire reinforcement sheets for lower in-place cost

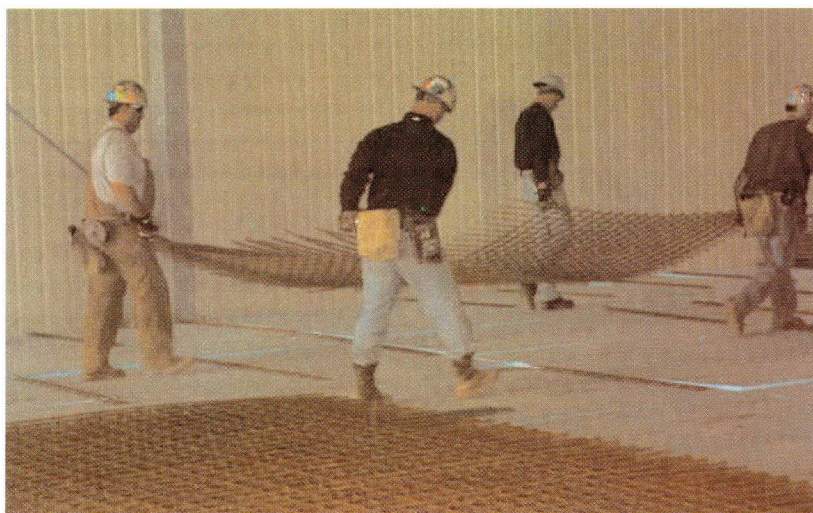
If you are tying rebar in slabs on grade, supported slabs, and walls, EWP can help you save up to 40% of your in-place reinforcing costs. High yield (up to 80 ksi yield strength) welded wire reinforcement (WWR) presents a weight savings of up to 25% compared to standard Grade 60 rebar. This weight savings brings the material costs of WWR and rebar to a near level playing field. Now look at the time savings of placing WWR versus placing rebar. WWR can be placed up to 3 times faster than rebar, and today more so than ever before, time is money.

It is easy to see the advantages that pre-engineered, custom manufactured sheets of structural WWR offer over rebar when you compare the in-place costs. EWP's specialist staff together with its state of the art manufacturing equipment can provide

you with an efficient reinforcing layout for your project. We are committed to providing the best service in the industry.

The tables on the next two pages provide a quick reference for converting rebar to WWR. The table on page 2 compares rebar and WWR at equal yield strengths of 60 ksi. The table on page 3 compares rebar at Grade 60 with WWR at Grade 80. To use these tables, find the rebar size and spacing on the left side of the table and read straight across in the same row to find the corresponding wire size and wire spacing. Wire spacings begin at 4" and go up to 18" center to center. Approximate weights per 100 square feet are listed for each material and can vary significantly depending on sheet size, splice length, etc. Call EWP for a quotation on your next project and you may never tie rebar again.

Custom pre-engineered structural WWR sheets are quickly placed into position, saving time and money.



Equivalency Table for Reinforcing Bars and Welded Wire Reinforcement *

(Both materials at 60,000 psi yield strength)

Rebar Size & Spacing				Choose an Equivalent Welded Wire Reinforcement Style							
Bar #	Spacing	As/ft.	LBS/CSF	As/ft.	4"	6"	8"	12"	16"	18"	LBS/CSF
3	4"	.330	112	.330	11.0	16.5	22.0				112
3	6"	.220	75	.220	7.3	11.0	14.7	22.0	29.3		75
3	8"	.165	56	.165	5.5	8.3	11.0	16.5	22.0	24.8	56
3	9"	.147	50	.147	4.9	7.4	9.8	14.7	19.6	22.0	50
3	10"	.132	45	.132	4.4	6.6	8.8	13.2	17.6	19.8	45
3	12"	.110	37	.110	3.7	5.5	7.3	11.0	14.7	16.5	37
3	14"	.094	32	.094	3.1	4.7	6.3	9.4	12.5	14.1	32
3	16"	.083	28	.083		4.2	5.5	8.3	11.0	12.5	28
3	18"	.073	25	.073		3.7	4.9	7.3	9.7	11.0	25
4	4"	.600	204	.600	20.0	30.0					204
4	6"	.400	136	.400	13.3	20.0	26.7				136
4	8"	.300	102	.300	10.0	15.0	20.0	30.0			102
4	9"	.267	91	.267	8.9	13.3	17.8	26.7			91
4	10"	.240	82	.240	8.0	12.0	16.0	24.0			82
4	12"	.200	68	.200	6.7	10.0	13.3	20.0	26.7	30.0	68
4	14"	.171	58	.171	5.7	8.6	11.4	17.1	22.8	25.7	58
4	16"	.150	51	.150	5.0	7.5	10.0	15.0	20.0	22.5	51
4	18"	.133	45	.133	4.4	6.7	8.9	13.3	17.8	20.0	45
5	4"	.930	316	.930	31.0						316
5	6"	.620	211	.620	20.7	31.0					211
5	8"	.465	158	.465	15.5	23.3	31.0				158
5	9"	.413	140	.413	13.8	20.7	27.5				140
5	10"	.372	126	.372	12.4	18.6	24.8				126
5	12"	.310	105	.310	10.3	15.5	20.7	31.0			105
5	14"	.266	90	.266	8.9	13.3	17.7	26.6			90
5	16"	.233	79	.233	7.8	11.7	15.5	23.3	31.0		79
5	18"	.207	70	.207	6.9	10.4	13.8	20.7	27.6	31.0	70
6	6"	.880	299	.880	29.3						299
6	8"	.660	224	.660	22.0						224
6	9"	.587	200	.587	19.6	29.3					200
6	10"	.528	179	.528	17.6	26.4					179
6	12"	.440	150	.440	14.7	22.0	29.3				150
7	6"	1.200	408	1.200							408
7	8"	.900	306	.900	30.0						306
7	9"	.800	272	.800	26.7						272
7	10"	.720	245	.720	24.0						245
7	12"	.600	204	.600	20.0	30.0					204
8	8"	1.185	403	1.185							403
8	9"	1.053	358	1.053							358
8	10"	.948	322	.948							322
8	12"	.790	269	.790	26.3						269
9	10"	1.200	408	1.200							408
9	12"	1.000	340	1.000							340

* For estimating purposes only.

- Notes:
1. Weights per 100 square feet are for one direction only. Double the weight for the same reinforcing in the other direction, or add the appropriate weight for a different reinforcing pattern in the other direction.
 2. Weights per 100 square feet are theoretical and are intended for estimating purposes only. Contact EWP for a customized estimate to fit your specific project requirements.
 3. In accordance with ACI 318, the maximum spacing permitted in plain welded wire reinforcement (W) is 12 inches, and the maximum spacing for deformed welded wire reinforcement (D) is 16 inches. The 18-inch spacing in the table above is not recommended for use in applications other than slab on grade, which is not governed by ACI 318.

Equivalency Table for Reinforcing Bars and High Yield Welded Wire Reinforcement *

(Rebar at 60,000 psi yield strength, Welded Wire Reinforcement at 80,000 psi yield strength)

Rebar Size & Spacing				Choose a Grade 80 Equivalent Welded Wire Reinforcement Style							
Bar #	Spacing	As/ft.	LBS/CSF	As/ft.	4"	6"	8"	12"	16"	18"	LBS/CSF
3	4"	.330	112	.248	8.3	12.4	16.5	24.8			84
3	6"	.220	75	.165	5.5	8.3	11.0	16.5	22.0	24.8	56
3	8"	.165	56	.124	4.1	6.2	8.3	12.4	16.5	18.6	42
3	9"	.147	50	.110	3.7	5.5	7.3	11.0	14.7	16.5	37
3	10"	.132	45	.099	3.3	5.0	6.6	9.9	13.2	14.9	34
3	12"	.110	37	.083		4.2	5.5	8.3	11.0	12.5	28
3	14"	.094	32	.071		3.6	4.7	7.1	9.4	10.7	24
3	16"	.083	28	.062		3.1	4.1	6.2	8.3	9.3	21
3	18"	.073	25	.055			3.7	5.5	7.3	8.3	19
4	4"	.600	204	.450	15.0	22.5	30.0				153
4	6"	.400	136	.300	10.0	15.0	20.0	30.0			102
4	8"	.300	102	.225	7.5	11.3	15.0	22.5	30.0		76
4	9"	.267	91	.200	6.7	10.0	13.3	20.0	26.7	30.0	68
4	10"	.240	82	.180	6.0	9.0	12.0	18.0	24.0	27.0	61
4	12"	.200	68	.150	5.0	7.5	10.0	15.0	20.0	22.5	51
4	14"	.171	58	.129	4.3	6.5	8.6	12.9	17.2	19.3	44
4	16"	.150	51	.113	3.8	5.7	7.5	11.3	15.0	17.0	38
4	18"	.133	45	.100	3.3	5.0	6.7	10.0	13.3	15.0	34
5	4"	.930	316	.698	23.3						237
5	6"	.620	211	.465	15.5	23.3	31.0				158
5	8"	.465	158	.349	11.6	17.5	23.3				119
5	9"	.413	140	.310	10.3	15.5	20.7	31.0			105
5	10"	.372	126	.279	9.3	14.0	18.6	27.9			95
5	12"	.310	105	.233	7.8	11.7	15.5	23.3	31.0		79
5	14"	.266	90	.199	6.6	10.0	13.3	19.9	26.6	29.9	68
5	16"	.233	79	.174	5.8	8.7	11.7	17.4	23.3	26.1	59
5	18"	.207	70	.155	5.2	7.8	10.3	15.5	20.7	23.3	53
6	6"	.880	299	.660	22.0						224
6	8"	.660	224	.495	16.5	24.8					168
6	9"	.587	200	.440	14.7	22.0	29.3				150
6	10"	.528	179	.396	13.2	19.8	26.4				135
6	12"	.440	150	.330	11.0	16.5	22.0				112
7	6"	1.200	408	.900	30.0						306
7	8"	.900	306	.675	22.5						229
7	9"	.800	272	.600	20.0	30.0					204
7	10"	.720	245	.540	18.0	27.0					184
7	12"	.600	204	.450	15.0	22.5	30.0				153
8	8"	1.185	403	.889	29.6						302
8	9"	1.053	358	.790	26.3						268
8	10"	.948	322	.711	23.7						242
8	12"	.790	269	.593	19.8	29.7					201
9	10"	1.200	408	.900	30.0						306
9	12"	1.000	340	.750	25.0						255

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