

### **Expanded Metal Sheet Production and Available Stock**

Standard expanded metal is a standard form that is offered as it comes from the press. The threads and bonds are set at a uniform angle to the sheet plane. It offers additional strength and firmness and has skid resistant surface.

Flattened expanded metal: It is produced by passing the standard expanded sheet through cold roll reducing mill. The received sheet has flattened surface, reduced thickness and elongated pattern.

Expanded metal is fit for use where firm, durable and lightweight surface is required.

#### Design factors:

Practical dimensions: SWD and LWD.

SWD: short way of design:

SWO: Short way of opening

LWD- long way of design

LWO: Long way of opening

Strands: It describes the sides of expanded metal

Strand thickness: gauge thickness of sheet

Strand width: magnitude of metal supplied to dies to develop single strand

Bond: the contact of two strands.

### **Production**

Side shearing: Metal piece is cut parallel to the long dimension of the diamond.

Random side shearing: A cut is made parallel to the LWD of sheet that creates open diamonds.

Bond Side shearing: A cut is made along the sheet length on the center line of bond over the specific width.

End shearing: it includes shearing a metal expanded sheet piece to a specific length. It creates open diamonds at both ends and offers close tolerances upon shearing the both ends.

End Bond Shearing: Shearing a metal piece to a definite length (LWD). One end is cut on the bond parallel to SWD whilst the other end contains the open diamond.

### Expanded metal sheet Designs

Expanded metal sheet has been slit and expanded ten times to its actual width that increases its strength and durability of the actual sheet. It is used in the industrial or domestic applications that need free air and light flow such as in partitions, guards, enclosures, trays, bins, grills, walkways and more.

### Stainless steel Standard expanded metal

Style	Lbs per 100 sq. ft	Sheet size ft		Design size, inch		Opening size, inch		Strand size, inch		Thicknes s, inch	No. of designs per ft	Open area
		Width	Length									
		SWD	LWD	SWD	LWD	SWO	LWO	Width	Thicknes s		SWD	
3/16 “ -.032	25	8 ft	4 ft	.218 in	.438 in	.078 in	.313 in	.060 in	.029 in	.028 in	60	43 %
½” - .051	25	4 ft	8 ft	.500 in	1.270 in	.313 in	1 in	.091 in	.040 in	.040 in	24	57 %
½” - .081	41	4 ft	8 ft	.500 in	1.270 in	.313 in	1 in	.103 in	.060 in	.060 in	24	57 %
3/4” - .051	16	4 ft	8 ft	.923 in	2.120 in	.750 in	1.813 in	.114 in	.040 in	.040 in	13	73 %
3/4” - .064	20	4 to 8 ft	8 to 4 ft	.923 in	2.130 in	.750 in	1.780 in	.122 in	.051 in	.051 in	13	72 %
3/4” - .081L	25	4 to 8 ft	8 to 4 ft	.923 in	2.215 in	.687 in	1.750 in	.134 in	.070 in	.070 in	13	70 %
3/4” - .081H	38	4 to 8 ft	8 to 4 ft	.923 in	2.120 in	.688 in	1.750 in	.172 in	.070 in	.070 in	13	63 %
3/4” - .125	61	4 ft	8 ft	.923 in	2.120 in	.625 in	1.750 in	.180 in	.095 in	.095 in	13	55 %
3/4” - .188	107	4 to 8 ft	8 to 4 ft	.923 in	2.130 in	.484 in	1.593 in	.205 in	.170 in	.170 in	13	60 %
1 ½”-.051	11	4 to 8 ft	8 to 4 ft	1.330 in	3.090 in	1.095 in	2.750 in	.120 in	0.040 in	.040 in	9	80 %
1 ½”-.081	20	4 ft	8 ft	1.333 in	3.150 in	1.063 in	2.750 in	.144 in	.055 in	.055 in	9	75 %
1 ½”-.125	40	4 ft	8 ft	1.333 in	3.150 in	1.100 in	2.750 in	.190 in	.080 in	.080 in	9	65 %

Stainless Steel Flattened Expanded Metal												
Style	Lbs per 100 sq. ft	Sheet size ft		Design size, inch		Opening size, inch		Strand size, inch		Overall thickness,	No. of designs per ft	Open area
		Width	Length									
		SWD	LWD	SWD	LWD	SWO	LWO	Width	Thickness		SWD	
3/16 " - .032	23	8 ft	8 ft	.200 in	.500 in	.166 in	.437 in	.020 in	.032 in	.068 in	60	52 %
½" - .051	27	4 ft	8 ft	.500 in	1.200 in	.375 in	.938 in	.094 in	.051 in	.158 in	24	70 %
½" - .081	44	4 ft	8 ft	.500 in	1.200 in	.813 in	.938 in	.096 in	.081 in	.186 in	24	60 %
3/4" - .051	17	4 ft	8 ft	.923 in	2 in	.823 in	1.175 in	.109 in	.051 in	.200 in	13	90 %
3/4" - .064	22	4 to 8 ft	8 to 4 ft	.923 in	2 in	.750 in	1.660 in	.111 in	.064 in	.200 in	13	75 %
3/4" - .081	41	4 ft	8 ft	.923 in	2 in	.750 in	1.688 in	.166 in	.081 in	.300 in	13	74 %
3/4" - .081L	27	4 to 8 ft	8 to 4 ft	.923 in	2 in	.750 in	1.680 in	.110 in	.081 in	.200 in	13	76 %
3/4" - .081H	41	4 to 8 ft	8 to 4 ft	.923 in	2 in	.688 in	1.688 in	.165 in	.081 in	.300 in	13	69 %
3/4" - .0125	65	4 ft	8 ft	.923 in	2 in	.590 in	1.688 in	.170 in	.125 in	.305 in	13	66 %
3/4" - .188	113	4 to 8 ft	8 to 4 ft	.923 in	2 in	1.225 in	1.350 in	.200 in	.188 in	.400 in	13	60 %
1 1/2" - .051	13	4 to 8 ft	8 to 4 ft	1.330 in	3 in	1.225 in	2.400 in	.110 in	.051 in	.200 in	9	88 %

Style	Lbs per 100 sq. ft	Sheet size ft		Design size		Opening size		Strand size		Overall thickness	No. of designs per ft	% open area
		Width	Length									
		SWD	LWD	SWD	LWD	SWO	LWO	Width	Thickness		SWD	
½ " - #20	50	4 ft	8 ft	.500 in	1.20 in	.437 in	.097 in	.080 in	.037 in	.164 in	24	70 %
½ " - #18	73	4 ft	8 ft	.500 in	1.20 in	.438 in	.938 in	.087 in	.050 in	.164 in	24	77 %
½ " - #16	91	4 ft	8 ft	.500 in	1.20 in	.438 in	.938 in	.087 in	.062 in	.164 in	24	70 %
½ " - #13	187	4 ft	8 ft	.500 in	1.20 in	.313 in	.875 in	.120 in	.093 in	.225 in	24	58 %
3/4 " - #18	48	4 ft	8 ft	.923 in	2 in	.813 in	1.750 in	.106 in	.050 in	.200 in	13	89 %
3/4 " - #16	60	4 ft	8 ft	.923 in	2 in	.813 in	1.750 in	.106 in	.062 in	.200 in	13	85 %
3/4 " - #13	91	4 ft	8 ft	.923 in	2 in	.750 in	1.688 in	.108 in	.093 in	.200 in	13	78 %
3/4 " - #9	205	4 ft	8 ft	.923 in	2 in	.688 in	1.563 in	.161 in	.140	.300 in	13	67 %
1 ½"-#16	45	4 ft	8 ft	1.333 in	3 in	1.250 in	2.750 in	.115 in	.062 in	.220 in	9	89 %
1 ½"-#13	68	4 ft	8 ft	1.333 in	3 in	1.250 in	2.625 in	.116 in	.093 in	.220 in	9	86 %
1 ½"-#9	137	4 ft	8 ft	1.333 in	3 in	1.125 in	2.500 in	.155 in	.140 in	.280 in	9	75 %

Flattened expanded metal												
½"-#20	48	4 ft	8 ft	.500 in	1.260 in	0.312 in	1 in	.091 in	.033 in	.033 in	24	60 %
½"-18	69	4 ft	8 ft	.500 in	1.260 in	0.313 in	1 in	.093 in	.033 in	.033 in	24	68 %
½"-#16	86	4 ft	8 ft	.500 in	1.260 in	0.313 in	1 in	.093 in	.040 in	.040 in	24	60 %
½"-#13	178	4 ft	8 ft	.500 in	1.260 in	0.250 in	1 in	.132 in	.080 in	.080 in	24	56 %
¾"-#18	46	4 ft	8 ft	.923 in	2.100 in	0.750 in	1.813 in	.118 in	.040 in	.040 in	13	77 %
¾"-#16	57	4 ft	8 ft	.923 in	2.100 in	0.750 in	1.813 in	.118 in	.048 in	.048 in	13	75 %
¾"-#13	87	4 ft	8 ft	.923 in	2.100 in	0.625 in	1.750 in	.120 in	.070 in	.070 in	13	74 %
¾"-#9	195	4 ft	8 ft	.923 in	2.100 in	0.563 in	1.688 in	.160 in	.119 in	.119 in	13	64 %
1 1/2"-#16	43	4 ft	8 ft	1.330 in	3.150 in	1.063 in	2.750 in	.124 in	.050 in	.050 in	9	83 %
1 1/2"-#13	65	4 ft	8 ft	1.330 in in	3.150 in	1 in	2.625 in	.124 in	.079 in	.079 in	9	79 %
1 1/2"-#9	131	4 ft	8 ft	1.330 in	3.150 in	0.938 in	2.625 in	.165 in	.119 in	.119 in	9	76 %

#### Standard Expanded Metal ¼ inch by 2 inch diamond designs

Style	Lbs per 100 sq. ft	Sheet size ft		Design size, inch		Opening size, inch		Strand size, inch		Thickne ss, inch	No. of designs per ft		Open area
		Width	Length										
		SWD	LWD	SWD	LWD	SWO	LWO	Width	Thickne ss		SWD	LWD	
¼" – 20	86	4	8	.250 in	1 in	.125 in	.718 in	.072 in	.036 in	.135 in	48	12	45 %
¼" – 18	114	4	8	.250 in	1 in	.110 in	.718 in	.072 in	.048 in	.147 in	48	12	43 %
1/2" –20	43	4	8	.500 in	1 in	.438 in	.938 in	.072 in	.036 in	.140 in	24	10	80 %
1/2" –18	70	4 & 6	8 & 10	.500 in	1.20 in	.438 in	.938 in	.088 in	.048 in	.172 in	24	10	72 %
1/2" –16	86	4 & 6	8 & 10	.500 in	1 in	.375 in	.938 in	.087 in	.060 in	.175 in	24	10	65 %
1/2" –13	147	4 & 6	8 & 10	.500 in	1.20 in	.312 in	.938 in	.096 in	.092 in	.204 in	24	10	57 %
¾"-16	54	4 & 6	8 & 10	.923 in	2 in	.813 in	1.750 in	.101 in	.060 in	.210 in	13	6	78 %
¾"-13	80	4 & 6	8 & 10	.923 in	2 in	.750 in	1.688 in	.096 in	.092 in	.205 in	13	6	76 %
¾"-10	120	4 & 6	8 & 10	.923 in	2 in	.750 in	1.625 in	.144 in	.092 in	.290 in	13	6	72 %
¾" -9	180	4 & 6	8 & 10	.923 in	2 in	.688 in	1.562 in	.150 in	.134 in	.312 in	13	6	68 %
1"-16	55	5	8	1 in	2.40 in	.938 in	2.062 in	.087 in	.060 in	.192 in	12	5	82 %
1 ½" - 18	20	4	8	1.33 in	3 in	1.313 in	2.625 in	.068 in	.048 in	.140 in	9	4	90 %
1 ½" – 16	40	4	8	1.33 in	3 in	1.250 in	2.625 in	.108 in	.060 in	.230 in	9	4	85 %

1 ½" – 13	60	4 & 6	8 & 10	1.33 in	3 in	1.188 in	2.500 in	.105 in	.092 in	.242 in	9	4	85 %
1 ½" – 10	79	4 & 6	8 & 10	1.33 in	3 in	1.188 in	2.500 in	.138 in	.092 in	.284 in	9	4	80 %
1 ½" – 9	120	4 & 6	8 & 10	1.33 in	3 in	1.125 in	2.375 in	.144 in	.134 in	.312 in	9	4	76 %
1 ½" – 6	250	4 & 6	8	1.33 in	3 in	1.110 in	2.313 in	.203 in	.198 in	.433 in	9	4	69 %
2" – 10	68	6	12	1.85 in	4 in	1.625 in	3.438 in	.164 in	.092 in	.327 in	6.5	3	82 %
2" – 9	90	4	8	1.85 in	4 in	1.563 in	3.375 in	.149 in	.134 in	.312 in	6.5	3	84 %

Style	Lbs per 100 sq. ft	Sheet size ft		Design size, inch		Opening size, inch		Strand size, inch		Thicknes s, inch	No. of designs per ft		Open area
		Width	Length										
		SWD	LWD	SWD	LWD	SWO	LWO	Width	Thicknes s		SWD	LWD	
3 lb	3	4 & 6	8, 10 & 12	1.33 in	5.33 in	.940 in	3.44 in	.264 in	.183 in	.540 in	9	2.25	60 %
3.14	3.14	4 – 4 & 6	8 & 10	2 in	6 in	1.625 in	4.88 in	.312 in	.656 in	.656 in	6	2	55 %
4	4	4, 5 & 6	8 & 10	1.33 in	5.33 in	.940 in	3.44 in	.300 in	.618 in	.618 in	9	2.25	58 %
4.27	4.27	4 & 6	8 & 10	1.41 in	4 in	1 in	2.88 in	.300 in	.625 in	.625 in	8.5	3	50 %
5	5	4, 5 & 6	8 & 10	1.33 in	5.33 in	.813 in	3.38 in	.331 in	.655 in	.655 in	9	2.25	50 %
6.25	6.25	4 & 6	8 & 12	1.41 in	5.33 in	.813 in	3.38 in	.350 in	.715 in	.715 in	8.5	2.25	50 %
7	7	4	8	1.41 in	5.33 in	.813 in	3.38 in	.391 in	.740 in	.740 in	8.5	2.25	45 %

Flattened expanded metal ¼ inch by 1-1/2 inch diamond design

Style	Lbs per 100 sq. ft	Sheet size ft		Design size, inch		Opening size, inch		Strand size, inch		Thickness, inch	No. of designs per ft		Open area
		Width	Length										
		SWD	LWD	SWD	LWD	SWO	LWO	Width	Thickness		SWD	LWD	
¼" – 20	82	3 & 4	8	.250 in	1.05 in	.084 in	.715 in	.079 in	.030 in	.030 in	48	11.6	35 %

¼" – 18	108	3 & 4	8	.250 in	1.05 in	.075 in	.715 in	.080 in	.040 in	.040 in	48	11.6	35 %
1/2" – 20	40	3 & 4	8	.500 in	1.25 in	.375 in	1 in	.079 in	.029 in	.029 in	24	9.5	65 %
1/2" – 18	66	3 & 4	8 & 10	.500 in	1.25 in	.312 in	1 in	.097 in	.039 in	.039 in	24	9.5	60 %
1/2" – 16	82	3 & 4	8 & 10	.500 in	1.25 in	.312 in	1 in	.096 in	.050 in	.050 in	24	9.5	63 %
1/2" – 13	140	3 & 4	8 & 10	.500 in	1.25 in	.265 in	1 in	.107 in	.070 in	.070 in	24	9.5	52 %
¾"-16	51	3 & 4	8 & 10	.923 in	2.10 in	.750 in	1.750 in	.111 in	.048 in	.048 in	13	5.7	74 %
¾"-14	63	3 & 4	8 & 10	.923 in	2.10 in	.688 in	1.813 in	.105 in	.061 in	.061 in	13	5.7	74 %
¾"-13	75	3 & 4	8, 10, 12	.923 in	2.10 in	.688 in	1.781 in	.106 in	.070 in	.070 in	13	5.7	74 %
¾"-10	114	4	8	.923 in	2.10 in	.637 in	1.755 in	.160 in	.070 in	.070 in	13	5.7	68 %
¾"-9	171	3 & 4	8, 10, 12	.923 in	2.10 in	.563 in	1.688 in	.165 in	.120 in	.120 in	13	5.7	63 %
1"-16	41	3 & 4	8	1 in	2.50 in	.813 in	2.250 in	.098 in	.050 in	.050 in	12	4.684	78 %
1 ½"-16	29	4	8	1.33 in	3.20 in	1.175 in	2.620 in	.093 in	.050 in	.050 in	9	3.750	83 %
1 ½"-16	38	3 & 4	8	1.33 in	3.20 in	1.062 in	2.750 in	.119 in	.048 in	.048 in	9	3.750	83 %
1 ½"-14	46	3 & 4	8	1.33 in	3.20 in	1.062 in	2.750 in	.134 in	.060 in	.060 in	9	3.750	80 %
1 ½"-13	57	3 & 4	8 & 10	1.33 in	3.20 in	1.062 in	2.750 in	.116 in	.070 in	.070 in	9	3.750	80 %
1 ½"-9	114	3 & 4-4	8 & 10, 13	1.33 in	3.20 in	1 in	2.563 in	.158 in	.110 in	.110 in	9	3.750	75 %