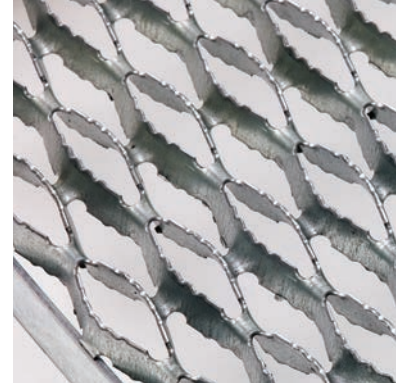
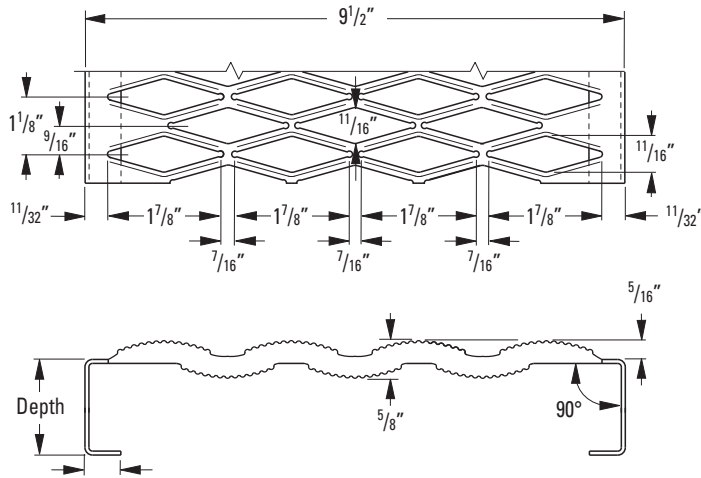


Safe Loading Tables

4-Diamond Plank — 9 1/2" Width (available in stainless steel)



Relief hole available upon request on 12 Ga. and 14 Ga. 4-diamond planks

Product Selection/Design Tables

Allowable Loads and Deflections: U=Uniform Load (lb./ft.²) C= Concentrated Load (lb.) D=Deflection (in.)
Spans to the left of heavy red line produce a deflection of 1/4" or less under a uniform load of 100 lb./ft.²

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Span																				
				2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"				
Steel 14 ga.	1 1/2" (38.1)	3.6 (5.36)	41514	U	663	426	296	219	168	134	109	90	77											
				D	.06	.10	.14	.20	.26	.33	.41	.50	.59											
				C	525	421	352	303	266	238	215	197	182											
				D	.05	.08	.11	.16	.21	.26	.33	.40	.47											
	2"	3.8 (5.65)	42014	U	1100	705	491	362	278	220	179	148	125	107	93	81	72	58	47					
				D	.06	.09	.13	.17	.23	.29	.36	.43	.52	.61	.71	.82	.94	1.20	1.51					
				C	730	698	583	501	440	392	354	323	298	276	258	242	228	205	187					
				D	.04	.07	.10	.14	.18	.23	.28	.35	.41	.49	.57	.66	.75	.96	1.20					
	2 1/2" (63.5)	4.1 (6.10)	42514	U	1262	809	563	415	318	252	205	170	144	123	106	93	82	66	54	45				
				D	.04	.06	.08	.11	.14	.18	.23	.28	.33	.39	.45	.52	.60	.76	.95	1.17				
				C	730	730	669	574	504	449	406	370	341	316	295	277	261	235	214	197				
				D	.02	.04	.06	.09	.12	.15	.18	.22	.26	.31	.36	.42	.48	.61	.76	.94				
Steel 12 ga.	1 1/2" (38.1)	5.0 (7.44)	41512	U	906	581	405	298	229	182	148	123	104	89	77	67	60							
				D	.07	.11	.16	.21	.28	.36	.44	.54	.64	.76	.89	1.02	1.17							
				C	718	575	481	413	363	324	292	267	246	228	213	200	189							
				D	.06	.09	.13	.17	.23	.29	.35	.43	.52	.61	.71	.82	.94							
	2"	5.4 (8.04)	42012	U	1398	896	624	460	353	280	228	189	160	137	119	104	92	74	61	51	43			
				D	.05	.08	.11	.16	.20	.26	.32	.39	.47	.55	.65	.75	.85	1.10	1.38	1.69	2.03			
				C	1107	887	741	637	559	499	451	412	380	353	329	309	292	264	241	222	206			
				D	.04	.06	.09	.12	.16	.21	.26	.31	.37	.44	.52	.60	.68	.88	1.10	1.35	1.63			
	2 1/2" (63.5)	5.7 (8.48)	42512	U	2090	1339	931	685	525	416	338	280	236	201	174	152	134	107	87	73	62			
				D	.04	.06	.09	.13	.17	.21	.26	.32	.38	.44	.52	.60	.68	.87	1.08	1.32	1.58			
				C	1400	1325	1106	949	832	741	668	609	559	518	482	452	425	380	345	316	293			
				D	.03	.05	.07	.10	.13	.17	.21	.25	.30	.36	.41	.48	.54	.69	.86	1.05	1.27			
3" (76.2)	6.1 (9.08)	43012	U	2644	1694	1177	866	664	525	426	353	297	254	219	192	169	134	110	91	77				
			D	.04	.06	.08	.11	.14	.18	.22	.27	.32	.38	.44	.51	.58	.74	.92	1.12	1.35				
			C	1400	1400	1398	1200	1051	936	844	769	706	653	608	569	535	478	434	397	367				
			D	.02	.04	.06	.09	.11	.15	.18	.22	.26	.31	.35	.41	.47	.59	.74	.90	1.08				
Stainless Steel 304 16 ga.	2" (50.8)	3.2 (4.76)	42016-S	U	720	462	322	238	183	145	118	98	83	71	59									
				D	.05	.08	.11	.16	.20	.26	.32	.39	.47	.55	.61									
				C	570	457	382	329	289	258	234	214	197	184	165									
				D	.04	.06	.09	.12	.16	.21	.26	.31	.38	.44	.49									
Stainless Steel 316L 16 ga.	2" (50.8)	3.2 (4.76)	42016-SL	U	626	400	278	204	156	123	100	82	69	59	51									
				D	.04	.06	.10	.13	.17	.22	.27	.32	.39	.45	.53									
				C	492	397	330	283	248	220	198	180	165	152	141									
				D	.03	.05	.08	.10	.14	.17	.22	.26	.31	.36	.42									

4-Diamond Plank — 9 1/2" Width (available in stainless steel)

Product Selection/Design Tables

Allowable Loads and Deflections: U=Uniform Load (lb./ft.²) C= Concentrated Load (lb.) D=Deflection (in.)
Spans to the left of heavy red line produce a deflection of 1/4" or less under a uniform load of 100 lb./ft.²

Material Gauge	Channel Depth in. (mm)	Weight lb./in. ft. (kg/m)	Catalog Number	Span																		
				2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"		
Alum. Alloy 5052 .080"	1 1/2"* (38.1)	1.28 (1.90)	41512-A	U	499	319	222	163	124	98												
				D	.10	.15	.22	.31	.40	.51												
				C	395	316	263	226	197	175												
				D	.08	.12	.18	.25	.32	.41												
	2"	1.37 (2.03)	42012-A	U	732	468	325	239	183	145	117	97	81	69								
				D	.08	.13	.18	.25	.33	.42	.52	.63	.74	.87								
				C	568	463	386	331	290	257	232	211	192	177								
				D	.06	.10	.15	.20	.27	.34	.42	.51	.59	.69								
	2 1/2"* (63.5)	1.46 (2.17)	42512-A	U	1099	704	489	359	275	217	176	145	122	104	90	78	69					
				D	.07	.10	.15	.21	.28	.35	.43	.53	.63	.74	.85	.98	1.12					
				C	568	568	568	497	435	387	348	316	290	268	249	232	218					
				D	.05	.07	.12	.17	.22	.28	.35	.42	.50	.59	.68	.78	.89					
3"* (76.2)	1.55 (2.30)	43012-A	U	1350	864	600	441	338	267	216	179	150	128	110	96	84						
			D	.06	.09	.14	.19	.25	.31	.39	.47	.56	.66	.77	.88	1.00						
			C	568	568	568	568	535	475	428	389	356	329	305	285	267						
			D	.02	.05	.09	.14	.20	.25	.31	.38	.45	.53	.61	.70	.80						
Alum. Alloy 5052 .100"	1 1/2"* (38.1)	1.62 (2.41)	41510-A	U	568	364	253	186	142	112												
				D	.09	.15	.22	.30	.39	.50												
				C	450	360	300	257	225	200												
				D	.07	.12	.17	.24	.31	.40												
	2"	1.74 (2.58)	42010-A	U	1025	656	455	335	256	202	164	136	114	97	84	73	64					
				D	.09	.14	.20	.28	.37	.46	.58	.70	.83	.98	1.13	1.30	1.48					
				C	811	649	541	464	406	361	325	295	270	250	232	216	203					
				D	.07	.11	.16	.22	.29	.37	.46	.56	.66	.78	.90	1.04	1.18					
	2 1/2"* (63.5)	1.85 (2.75)	42510-A	U	1410	902	627	460	352	278	226	186	157	133	115	100	88					
				D	.07	.11	.16	.22	.28	.36	.44	.54	.64	.76	.88	1.01	1.15					
				C	886	886	744	638	558	496	446	406	372	343	319	298	279					
				D	.05	.09	.12	.17	.23	.29	.36	.43	.51	.60	.70	.81	.92					
3"* (76.2)	1.97 (2.93)	43010-A	U	1820	1165	809	594	455	360	291	241	202	172	149	129	114						
			D	.05	.08	.12	.17	.22	.28	.34	.42	.50	.59	.68	.78	.89						
			C	886	886	886	823	720	640	576	524	480	443	412	384	360						
			D	.02	.05	.09	.13	.17	.22	.27	.33	.40	.47	.54	.62	.71						

* Available on special order.

Engineering Data For Both Channels

Material Gauge	Channel Depth - in.	Sx in. ²	Ix in. ⁴	EI lb. x in. ²
Steel 14 ga.	1 1/2"	.174	.102	2.96 x 10 ⁶
	2"	.270	.193	5.60 x 10 ⁶
	2 1/2"	.307	.335	9.71 x 10 ⁶
Steel 12 ga.	1 1/2"	.216	.125	3.62 x 10 ⁶
	2"	.342	.264	7.66 x 10 ⁶
	2 1/2"	.504	.488	14.09 x 10 ⁶
Aluminum .080"	3"	.625	.722	20.94 x 10 ⁶
	1 1/2"	.171	.137	1.40 x 10 ⁶
	2"	.251	.246	2.51 x 10 ⁶
Aluminum .100"	2 1/2"	.379	.441	4.50 x 10 ⁶
	3"	.464	.602	6.14 x 10 ⁶
	1 1/2"	.196	.156	1.59 x 10 ⁶
Aluminum .100"	2"	.352	.309	3.15 x 10 ⁶
	2 1/2"	.486	.544	5.55 x 10 ⁶
	3"	.627	.911	9.29 x 10 ⁶
Stainless 304 16 ga.	2"	.165	.1425	4.13 x 10 ⁶
Stainless 316L 16 ga.	2"	.165	.1425	4.13 x 10 ⁶

Strut Loading

Material Gauge	Type Loading**	Load	Deflection in.
Steel 14 ga.	U	1844	.15
	Cs	730	.11
Steel 12 ga.	U	3537	.14
	Cs	1400	.11
Aluminum .080"	U	1435	.19
	Cs	568	.15
Aluminum .100"	U	2238	.23
	Cs	886	.15
Stainless 304 16 ga.	U	1450	.29
	Cs	574	.19
Stainless 316L 16 ga.	U	1243	.20
	Cs	492	.16

** U = Allowable Uniform Load (lb./ft.²)

Cs = Allowable Concentrated Load per ft. of length at mid-width (lb./ft.)