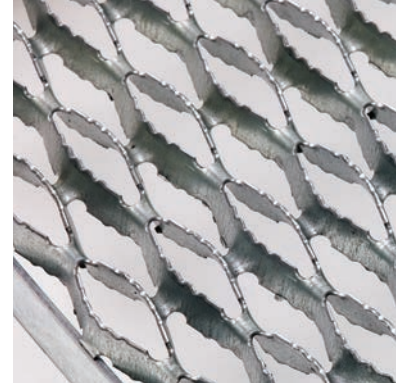
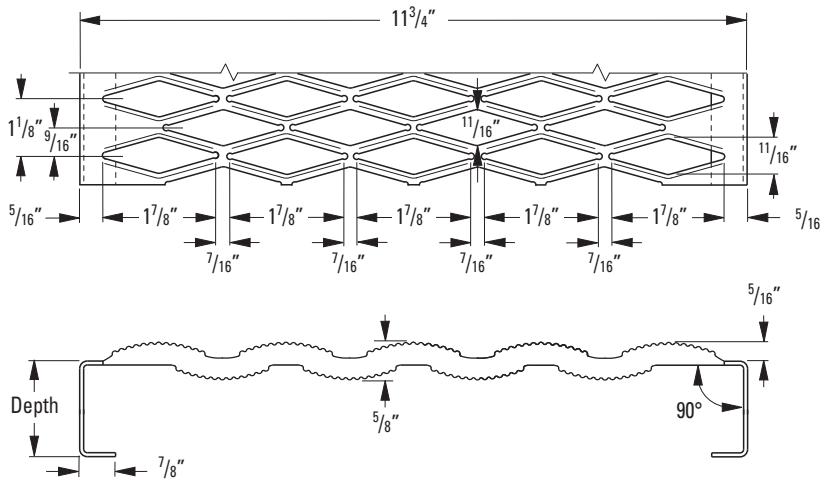


Safe Loading Tables

5-Diamond Plank — 11³/₄" Width (available in stainless steel)



Relief hole available upon request on 12 Ga. and 14 Ga. 5-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)	4.2 (6.25)	51514	U	536	344	240	177	136	108	88	74	62												
				D	.06	.10	.14	.20	.26	.33	.41	.50	.60												
				C	525	422	353	304	267	239	216	198	183												
				D	.05	.08	.12	.16	.21	.26	.33	.40	.48												
	2"	4.4 (50.8)	4.4 (6.55)	52014	U	890	571	397	293	225	178	145	120	102	87	76	66	59	47						
					D	.06	.09	.13	.17	.23	.29	.36	.43	.52	.61	.71	.83	.95	1.21						
					C	707	699	584	502	440	393	355	324	299	277	259	243	230	207						
					D	.04	.07	.10	.14	.18	.23	.29	.35	.42	.49	.57	.66	.76	.97						
	2 1/2"	4.7 (63.5)	4.7 (6.99)	52514	U	1021	655	456	336	258	204	166	138	116	100	86	76	67	54	44					
					D	.04	.06	.08	.11	.14	.18	.23	.28	.33	.39	.45	.52	.60	.77	.96					
					C	707	707	669	575	505	450	407	371	342	317	296	278	262	236	216					
					D	.02	.04	.06	.09	.12	.15	.18	.22	.26	.31	.36	.42	.48	.62	.77					
Steel 12 ga.	1 1/2"	5.9 (8.78)	51512	U	710	456	318	235	181	144	117	98	83	71	62	55	49								
				D	.07	.11	.15	.21	.27	.35	.44	.53	.64	.76	.89	1.03	1.18								
				C	695	558	467	402	354	317	287	263	244	227	213	201	190								
				D	.05	.08	.12	.17	.22	.28	.35	.43	.51	.60	.71	.82	.95								
	2"	6.2 (9.23)	6.2 (9.23)	52012	U	1131	725	505	372	286	227	185	154	130	111	97	85	75	60	50	42				
					D	.05	.08	.11	.16	.20	.26	.32	.39	.47	.56	.65	.75	.86	1.11	1.39	1.70				
					C	1107	888	742	638	561	501	453	414	382	355	332	312	295	266	243	224				
					D	.04	.06	.09	.12	.16	.21	.26	.31	.38	.44	.52	.60	.69	.89	1.11	1.36				
	2 1/2"	6.6 (63.5)	6.6 (9.82)	52512	U	1691	1083	753	554	425	337	273	226	151	141	123	109	87	71	59	59	50			
					D	.04	.06	.09	.13	.17	.21	.26	.32	.38	.45	.52	.60	.68	.87	1.09	1.33	1.60			
					C	1115	1115	1106	950	833	742	669	610	561	519	484	453	426	382	347	319	295			
					D	.02	.04	.07	.10	.13	.17	.21	.25	.30	.36	.41	.48	.55	.70	.87	1.06	1.28			
3"	7.0 (76.2)	7.0 (10.40)	53012	U	2138	1370	952	701	537	425	345	286	241	206	178	155	137	109	89	74	63				
				D	.04	.06	.08	.11	.14	.18	.22	.27	.32	.38	.44	.51	.58	.74	.93	1.13	1.36				
				C	1115	1115	1115	1115	1052	937	845	770	707	654	609	570	537	480	436	399	369				
				D	.02	.03	.05	.08	.11	.15	.18	.22	.26	.31	.36	.41	.47	.60	.74	.90	1.09				
Stainless 304 16 ga.	2"	3.7 (5.51)	52016-S	U	583	374	261	192	148	118	96	80	68	58	48										
				D	.05	.08	.11	.16	.20	.26	.32	.39	.47	.56	.64										
				C	464	458	323	330	290	259	235	215	199	185	165										
				D	.03	.06	.09	.12	.16	.21	.26	.32	.38	.45	.49										
Stainless 316L 16 ga.	2"	3.7 (5.51)	52016-SL	U	406	324	225	165	126	100	81	66	56	47											
				D	.04	.06	.10	.13	.17	.22	.27	.32	.39	.45											
				C	398	397	330	283	248	220	198	180	165	152											
				D	.03	.05	.08	.10	.14	.17	.22	.26	.31	.36											

5-Diamond Plank — 11³/₄" 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)	1.49 (2.22)	51512-A	U	403	255	179	132	100													
				D	.10	.15	.22	.31	.40													
				C	395	316	263	226	197													
				D	.08	.12	.18	.25	.32													
	2"	1.59 (2.36)	52012-A	U	592	379	263	193	148	117	95	78										
				D	.08	.13	.18	.25	.33	.42	.52	.63										
				C	466	466	386	331	290	257	232	211										
				D	.05	.10	.15	.20	.27	.34	.42	.51										
	2 1/2"* (63.5)	1.67 (2.48)	52512-A	U	889	569	395	290	222	176	142	118	99	84	73	63						
				D	.07	.10	.15	.21	.28	.35	.43	.53	.63	.74	.85	.98						
				C	466	466	466	466	435	387	348	316	290	268	249	232						
				D	.02	.05	.10	.16	.22	.28	.35	.42	.50	.59	.68	.78						
3"* (76.2)	1.75 (2.60)	53012-A	U	951	699	485	357	273	216	175	144	121	103	89	78	68						
			D	.05	.09	.14	.19	.25	.31	.39	.47	.56	.66	.77	.88	1.00						
			C	466	466	466	466	466	466	428	389	356	329	305	285	267						
			D	.02	.04	.07	.11	.17	.24	.31	.38	.45	.53	.61	.70	.80						
Alum. Alloy 5052 .100"	1 1/2"* (38.1)	1.88 (2.79)	51510-A	U	459	294	204	150	115	91												
				D	.09	.15	.22	.30	.39	.50												
				C	450	360	300	257	225	200												
				D	.07	.12	.17	.24	.31	.40												
	2"	2.00 (2.98)	52010-A	U	829	530	368	271	207	164	133	110	92	78	68	59						
				D	.09	.14	.20	.28	.37	.46	.58	.70	.83	.98	1.13	1.30						
				C	714	649	541	464	406	361	325	295	270	250	232	216						
				D	.06	.11	.16	.22	.29	.37	.46	.56	.66	.78	.90	1.04						
	2 1/2"* (63.5)	2.11 (3.14)	52510-A	U	1140	730	507	372	285	225	182	151	127	105	93	81	71					
				D	.07	.11	.16	.22	.28	.36	.45	.54	.64	.76	.88	1.01	1.15					
				C	714	714	714	638	558	496	446	406	372	343	319	298	279					
				D	.03	.07	.12	.17	.23	.29	.36	.43	.51	.60	.70	.81	.92					
3"* (76.2)	2.22 (3.30)	53010-A	U	1458	942	654	481	368	291	235	195	164	139	120	105	92						
			D	.05	.08	.12	.17	.22	.28	.34	.42	.50	.59	.68	.78	.89						
			C	714	714	714	714	714	640	576	524	480	443	412	384	360						
			D	.02	.04	.07	.12	.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	1444	.18
	Cs	707	.15
Steel 12 ga.	U	2277	.15
	Cs	1115	.12
Aluminum .080"	U	951	.24
	Cs	466	.20
Aluminum .100"	U	1458	.27
	Cs	714	.22
Stainless 304 16 ga.	U	947	.38
	Cs	464	.31
Stainless 316L 16 ga.	U	812	.31
	Cs	398	.25

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

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