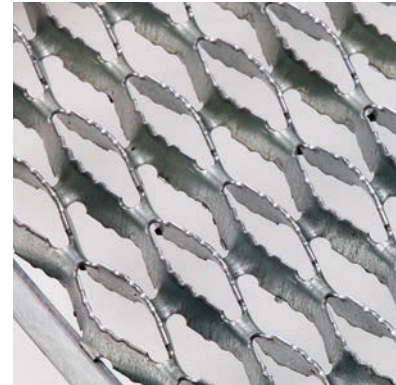
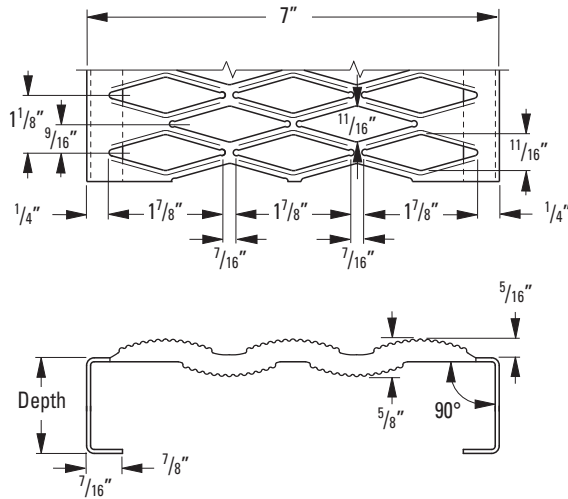


# Safe Loading Tables

## 3-Diamond Plank — 7" Width



Relief hole available upon request on 12 Ga. and 14 Ga. 3-diamond planks

### Product Selection/Design Tables

Allowable Loads and Deflections: U=Uniform Load (lb./ft.<sup>2</sup>) 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.<sup>2</sup>

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)	3.0 (4.46)	31514	U	899	577	402	269	227	180	147	122	103												
				D	.06	.10	.14	.20	.26	.33	.40	.49	.59												
				C	524	421	351	302	265	237	214	196	180												
				D	.05	.08	.11	.16	.21	.26	.32	.39	.47												
	2"	3.2 (50.8)	(4.76)	32014	U	1492	957	665	490	376	298	242	201	169	145	125	110	97	77	63					
					D	.06	.09	.13	.17	.23	.29	.35	.43	.51	.61	.71	.81	.93	1.19	1.49					
					C	871	697	582	500	439	391	353	322	296	275	256	240	226	203	185					
					D	.04	.07	.10	.14	.18	.23	.28	.34	.41	.48	.56	.65	.74	.85	.95	1.19				
	2 1/2" (63.5)	3.5 (5.21)	(5.21)	32514	U	1712	1097	763	562	431	342	277	230	194	166	144	126	111	89	73	61	52			
					D	.04	.06	.08	.11	.14	.18	.23	.27	.33	.39	.45	.52	.59	.76	.94	1.16	1.40			
					C	999	800	668	574	503	448	405	369	340	315	293	275	259	233	212	195	181			
					D	.03	.04	.06	.09	.11	.15	.18	.22	.26	.31	.36	.41	.47	.61	.76	.93	1.12			
Steel 12 ga.	1 1/2" (38.1)	4.1 (6.10)	31512	U	1189	763	532	392	301	239	195	162	137	118	102	90	79								
				D	.07	.11	.15	.21	.27	.35	.43	.52	.63	.74	.87	1.00	1.15								
				C	694	556	465	400	352	314	284	260	240	223	208	196	185								
				D	.05	.08	.12	.17	.22	.28	.34	.42	.50	.59	.69	.80	.92								
	2"	4.5 (6.70)	(6.70)	32012	U	1896	1216	846	623	478	379	308	256	216	185	160	140	124	99	82	68	58			
					D	.05	.08	.11	.16	.20	.26	.32	.39	.47	.55	.64	.74	.85	1.08	1.36	1.67	2.01			
					C	1106	886	740	636	558	498	450	410	378	350	327	307	289	260	238	219	203			
					D	.04	.06	.09	.12	.16	.21	.26	.31	.37	.44	.51	.59	.68	.87	1.09	1.33	1.61			
	2 1/2" (63.5)	4.9 (7.29)	(7.29)	32512	U	2836	1817	1263	929	712	564	457	379	319	272	235	206	181	144	118	98	83			
					D	.04	.06	.09	.13	.17	.21	.26	.32	.38	.44	.52	.59	.68	.86	1.07	1.31	1.57			
					C	1654	1325	1105	948	831	740	667	608	558	516	481	450	423	378	343	314	290			
					D	.03	.05	.07	.10	.13	.17	.21	.25	.30	.35	.41	.47	.54	.69	.86	1.05	1.25			
3" (76.2)	5.2 (7.74)	(7.74)	33012	U	3587	2298	1597	1174	900	712	578	478	403	344	297	259	228	181	148	123	104				
				D	.04	.06	.09	.13	.17	.21	.26	.32	.38	.44	.51	.59	.67	.86	1.07	1.30	1.55				
				C	1868	1675	1397	1199	1050	935	843	767	705	652	606	567	533	476	431	395	364				
				D	.03	.04	.06	.09	.11	.14	.18	.22	.26	.30	.35	.41	.46	.59	.73	.89	1.07				

# Safe Loading Tables

## 3-Diamond Plank — 7" Width

### Product Selection/Design Tables

Allowable Loads and Deflections: U=Uniform Load (lb./ft.<sup>2</sup>) 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.<sup>2</sup>

Material Gauge	Channel Depth in. (mm)	Weight lb./in. (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"	8'-6"	9'-0"	9'-6"	10'-0"			
Alum. Alloy 5052 .080"	1 1/2"* (38.1)	1.06 (1.58)	31512-A	U	667	443	301	221	168	133	108												
				D	.10	.15	.22	.31	.40	.51	.63												
				C	395	316	263	226	197	175	157												
	2"	1.15 (50.8)	1.71	32012-A	U	993	636	441	324	248	196	159	131	110	93	80							
					D	.08	.13	.18	.25	.33	.42	.52	.63	.74	.86	1.00							
					C	579	463	386	331	290	257	232	211	192	177	165							
	2 1/2"* (63.5)	1.24 (1.85)	1.85	32512-A	U	1492	955	663	487	373	295	239	197	166	141	122	106	93					
					D	.07	.10	.15	.21	.28	.35	.43	.53	.63	.74	.85	.98	1.12					
					C	812	696	580	497	435	387	348	316	290	268	249	232	218					
	3"* (76.2)	1.33 (1.98)	1.98	33012-A	U	1833	1173	815	598	458	362	293	242	204	174	150	130	115					
					D	.06	.09	.14	.19	.25	.31	.39	.47	.56	.66	.77	.88	1.00					
					C	846	846	713	611	535	475	428	389	356	329	305	285	267					
Alum. Alloy 5052 .100"	1 1/2"* (38.1)	1.34 (1.99)	31510-A	U	771	494	343	252	193	152	122	101											
				D	.09	.15	.22	.30	.39	.50	.63	.76											
				C	450	360	300	257	225	200	179	162											
	2"	1.46 (50.8)	2.38	32010-A	U	1391	890	618	454	348	275	223	184	155	132	114	99	87					
					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					
	2 1/2"* (63.5)	1.57 (2.34)	2.34	32510-A	U	1913	1225	850	625	478	378	306	253	213	181	156	136	120					
					D	.07	.11	.16	.22	.28	.36	.45	.54	.64	.76	.88	1.01	1.15					
					C	1116	893	744	638	558	496	446	406	372	343	319	298	279					
	3"* (76.2)	1.68 (2.50)	2.50	33010-A	U	2470	1581	1098	807	618	488	395	327	274	234	202	176	154					
					D	.05	.08	.12	.17	.22	.28	.34	.42	.50	.59	.68	.78	.89					
					C	1309	1153	961	823	720	640	576	524	480	443	412	384	360					

\* Available on special order.

### Engineering Data For Both Channels

Material Gauge	Channel Depth in.	Sx in. <sup>2</sup>	Ix in. <sup>4</sup>	EI lb. x in. <sup>2</sup>
Steel 14 ga.	1 1/2"	.174	.102	2.96 x 10 <sup>6</sup>
	2"	.270	.193	5.60 x 10 <sup>6</sup>
	2 1/2"	.307	.335	9.71 x 10 <sup>6</sup>
Steel 12 ga.	1 1/2"	.216	.125	3.62 x 10 <sup>6</sup>
	2"	.342	.264	7.66 x 10 <sup>6</sup>
	2 1/2"	.504	.488	14.09 x 10 <sup>6</sup>
Aluminum .080"	3"	.625	.722	20.94 x 10 <sup>6</sup>
	1 1/2"	.171	.137	1.40 x 10 <sup>6</sup>
	2"	.251	.246	2.51 x 10 <sup>6</sup>
Aluminum .100"	2 1/2"	.379	.441	4.50 x 10 <sup>6</sup>
	3"	.464	.602	6.14 x 10 <sup>6</sup>
	1 1/2"	.196	.156	1.59 x 10 <sup>6</sup>
Aluminum .100"	2"	.352	.309	3.15 x 10 <sup>6</sup>
	2 1/2"	.456	.544	5.55 x 10 <sup>6</sup>
	3"	.627	.911	9.29 x 10 <sup>6</sup>

### Strut Loading

Material Gauge	Type Loading**	Load	Deflection in.
Steel 14 ga.	U	3535	.11
	Cs	1031	.09
Steel 12 ga.	U	6405	.11
	Cs	1868	.09
Aluminum .080"	U	2901	.15
	Cs	846	.12
Aluminum .100"	U	4488	.16
	Cs	1309	.13

\*\* U = Allowable Uniform Load (lb./ft.<sup>2</sup>)  
Cs = Allowable Concentrated Load per ft. of length at mid-width (lb./ft.)