

SURFACE VEHICLE RECOMMENDED PRACTICE

An American National Standard

SAE J884

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LIQUID BALLAST TABLE FOR DRIVE TIRES OF AGRICULTURAL TRACTORS

Foreword—This Document has not changed other than to put it into the new SAE Technical Standards Board Format.

1. **Scope**—This SAE Recommended Practice is established for the purpose of providing average weight values for water or calcium chloride liquid filling solutions in SAE recommended drive tire sizes. It is recommended that tires be filled to valve stem level while the valve is located in the highest position (see Tables 1A and 1B).
2. **References**—There are no referenced publications specified herein.
3. **Notes**
- 3.1 **Marginal Indicia**—The change bar (I) located in the left margin is for the convenience of the user in locating areas where technical revisions have been made to the previous issue of the report. An (R) symbol to the left of the document title indicates a complete revision of the report.

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Table 1A—LIQUID BALLAST FOR DRIVE TIRES OF AGRICULTURAL MACHINES (SI UNITS)

Tire Size	Water Slush Free, 0°C Solid, 0°C liter	Water Slush Free, 0°C Solid, 0°C wt, kg	419.4 g CaCl ₂ /liter H ₂ O Slush Free, -24°C Solid, -47°C Water, L	419.4 g CaCl ₂ /liter H ₂ O Slush Free, -24°C Solid, -47°C CaCl ₂ , kg	419.4 g CaCl ₂ /liter H ₂ O Slush Free, -24°C Solid, -47°C Total wt, kg	599.3 g CaCl ₂ /liter H ₂ O Slush Free, -47°C Solid, -52°C Water, L	599.3 g CaCl ₂ /liter H ₂ O Slush Free, -47°C Solid, -52°C CaCl ₂ , kg	599.3 g CaCl ₂ /liter H ₂ O Slush Free, -47°C Solid, -52°C Total wt, kg
7.2-16	26	26	23	9.5	32	19	11	30
8.3-16	34	34	30	13	43	30	18	48
9.5-16	45	45	38	16	54	38	23	61
11.2-16	68	68	57	24	81	53	32	85
12.4-16	79	79	68	29	97	64	39	103
13.5-16.1	117	117	98	41	139	95	57	152
18.4-16	185	185	159	67	226	148	88	236
8.3-24	49	49	42	18	60	38	23	61
9.5-24	64	64	57	24	81	53	32	85
11.2-24	91	91	76	32	108	72	43	115
12.4-24	114	114	98	41	139	95	57	152
13.6-24	144	144	121	51	172	114	68	182
14.9-24	178	178	151	64	215	144	86	230
16.9-24	231	231	197	83	280	185	111	296
17.5L-24	208	208	178	75	253	170	102	272
19.5L-24	261	261	227	95	322	212	127	339
21L-24	329	329	280	117	397	265	159	424
14.9-26	182	182	155	65	220	148	88	236
16.9-26	246	246	212	89	301	197	118	315
18.4-26	299	299	257	108	365	242	145	387
23.1-26	485	485	413	173	586	390	234	624
24L-26	484	484	416	175	591	394	236	630
28L-26	594	594	507	213	720	481	288	769
11.2-28	102	102	91	38	129	83	50	133
12.4-28	132	132	114	48	162	106	64	170
13.6-28	163	163	140	59	199	132	79	211
14.9-28	201	201	174	73	247	163	98	261
16.9-28	261	261	223	94	317	212	127	339
18.4-28	318	318	273	114	387	257	154	411
21L-28	367	367	314	132	446	299	179	478
14.9-30	216	216	182	76	258	174	104	278
16.9-30	276	276	238	100	338	223	132	355
18.4-30	337	337	291	123	414	273	163	436
23.1-30	541	541	466	196	662	439	263	702
24.5-32	643	643	553	232	785	522	313	835

Table 1A—LIQUID BALLAST FOR DRIVE TIRES OF AGRICULTURAL MACHINES (SI UNITS) (continued)

Tire Size	Water Slush Free, 0°C Solid, 0°C liter	Water Slush Free, 0°C Solid, 0°C wt, kg	419.4 g CaCl ₂ /liter H ₂ O Slush Free, -24°C Solid, -47°C Water, L	419.4 g CaCl ₂ /liter H ₂ O Slush Free, -24°C Solid, -47°C CaCl ₂ , kg	419.4 g CaCl ₂ /liter H ₂ O Slush Free, -24°C Solid, -47°C Total wt, kg	599.3 g CaCl ₂ /liter H ₂ O Slush Free, -47°C Solid, -52°C Water, L	599.3 g CaCl ₂ /liter H ₂ O Slush Free, -47°C Solid, -52°C CaCl ₂ , kg	599.3 g CaCl ₂ /liter H ₂ O Slush Free, -47°C Solid, -52°C Total wt, kg
30.5L-32	821	821	704	295	999	666	399	1065
35.5L-32	1287	1287	1101	462	1563	1041	624	1665
14.9-34	238	238	204	86	290	193	116	309
16.9-34	310	310	265	111	376	250	150	400
18.4-34	379	379	322	135	457	307	184	491
20.8-34	485	485	413	173	586	390	234	624
23.1-34	602	602	515	216	731	485	290	775
8.3-36	68	68	57	24	81	57	34	91
13.9-36	193	193	167	70	237	159	95	254
13.6-38	216	216	185	78	263	174	104	278
15.5-38	250	250	212	89	301	201	120	321
16.9-38	341	341	291	123	414	276	166	442
18.4-38	416	416	356	149	505	337	202	539
20.8-38	530	530	454	191	645	431	259	690
24.5-38	1324	1324	1136	476	1612	1075	644	1719
14.9-42	341	341	291	122	413	276	166	442
16.9-42	360	360	310	130	440	291	175	466
18.4-42	435	435	371	156	527	352	211	563
20.8-42	560	560	481	201	682	454	272	726
8.3-44	79	79	68	29	97	64	39	103
9.5-44	110	110	95	40	135	87	52	139
12.4-46	201	201	170	72	242	162	98	260
13.6-46	246	246	208	88	296	197	118	315
14.9-46	303	303	257	108	365	246	147	393
16.9-46	386	386	333	140	473	314	188	502
18.4-46	488	488	420	176	596	397	238	635
20.8-46	568	568	384	203	687	458	274	732
9.5-48	117	117	102	43	145	95	57	152

Table 1B—LIQUID BALLAST FOR DRIVE TIRES OF AGRICULTURAL MACHINES (U.S. UNITS)

Tire Size	Water Slush Free, +32°F Solid, +32°F gal	Water Slush Free, +32°F Solid, +32°F wt, lb	3-1/2 lb CaCl ₂ /gal H ₂ O Slush Free, -12°F Solid, -52°F Water, gal	3-1/2 lb CaCl ₂ /gal H ₂ O Slush Free, -12°F Solid, -52°F CaCl ₂ , lb	3-1/2 lb CaCl ₂ /gal H ₂ O Slush Free, -12°F Solid, -52°F Total wt, lb	5 lb CaCl ₂ /gal H ₂ O Slush Free, -53°F Solid, -62°F Water, gal	5 lb CaCl ₂ /gal H ₂ O Slush Free, -53°F Solid, -62°F CaCl ₂ , lb	5 lb CaCl ₂ /gal H ₂ O Slush Free, -53°F Solid, -62°F Total wt, lb
7.2-16	7	58	6	21	71	5	25	67
8.3-16	9	75	8	28	95	8	40	107
9.5-16	12	100	10	35	118	10	50	133
11.2-16	18	150	15	53	178	14	70	187
12.4-16	21	175	18	63	213	17	85	227
13.5-16.1	31	258	26	91	308	25	125	333
18.4-16	49	409	42	147	497	39	195	520
8.3-24	13	108	11	39	131	10	50	133
9.5-24	17	142	15	53	178	14	70	187
11.2-24	24	200	20	70	237	19	95	253
12.4-24	30	250	26	91	308	25	125	333
13.6-24	38	317	32	112	379	30	150	400
14.9-24	47	392	40	140	474	38	190	507
16.9-24	61	509	52	182	616	49	245	654
17.5L-24	55	459	47	165	557	45	225	600
19.5L-24	69	575	60	210	710	56	280	747
21L-24	87	725	74	259	876	70	350	934
14.9-26	48	400	41	144	486	39	195	520
16.9-26	65	542	56	196	663	52	260	694
18.4-26	79	659	68	238	805	64	320	854
23.1-26	128	1068	109	382	1291	103	515	1374
24L-26	128	1068	110	385	1302	104	520	1387
28L-26	157	1309	134	469	1587	127	635	1694
11.2-28	27	225	24	84	284	22	110	293
12.4-28	35	292	30	105	355	28	140	374
13.6-28	43	359	37	130	439	35	175	467
14.9-28	53	442	46	161	545	43	215	574
16.9-28	69	575	59	207	699	56	280	747
18.4-28	84	701	72	252	852	68	340	907
21L-28	97	809	83	291	982	79	395	1054
14.9-30	57	475	48	168	568	46	230	614
16.9-30	73	609	63	221	746	59	292	787
18.4-30	89	742	77	270	912	72	360	960
23.1-30	143	1193	123	431	1457	116	580	1547

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