

TABLE 70. PROPERTIES OF CALCIUM CHLORIDE BRINE

SALT REQUIRED		FREEZING POINT		AMMONIA SOL. PRES.		Degrees Salometer at 60° F.	Degrees Baume at 60° F.	Specific Gravity at 60° F.	Specific Heat	Per Cent of Salt by Weight
Pounds per Gal.	Pounds per Cu. Ft.	Degrees Fahrenheit	Degrees Centigrade	At Freezing Point of Brine	At 5° Above Freezing Point of Brine					
1/2	3 3/4	+29	-1.6	43.5°	50.0°	12	3	1.024	0.980	3
1	7 1/2	+27	-2.8	41.0	47.0	27	6	1.041	0.964	5
1 1/4	8 1/2	+25	-3.9	38.5	44.5	36	9	1.058	0.936	7
1 1/2	11 1/4	+23	-5.0	36.5	42.0	40	10	1.076	0.91	9
1 3/4	13	+21	-6.1	34.0	40.0	44	11	1.085	0.896	10
2	15	+18	-7.8	31.0	36.5	54	13	1.103	0.884	12
2 1/4	17	+14	-10.0	27.0	32.0	62	15	1.121	0.868	14
2 1/2	19	+4	-15.5	18.5	22.5	80	20	1.159	0.844	18
3	22 1/2	+1.5	-18.2	16.5	20.0	88	22	1.179	0.834	20
3 1/2	26	-8	-22.2	10.0	13.0	95	24	1.199	0.817	22
4	30	-17	-27.2	4.5	7.5	104	26	1.219	0.799	24
4 1/2	34	-27	-32.8	0.0	2.0	112	28	1.240	0.778	26
5	37 1/2	-39	-39.4	9"	5.5"	120	34	1.305		32
5 1/2	41	-54	-47.7	17"	14.5"	Max. D.	32	1.283		30

TABLE 71. COLD STORAGE PIPING
Ratio of Cubic Feet of Room Space to One Linear Foot of Various Size Ammonia and Brine Pipe

Cubic Feet of Space to Cool	TEMP. 20° F.			TEMP. 15° F.			TEMP. 10° F.			TEMP. 5° F.			TEMP. 0° F.		
	Cu. Ft. to 1 Ft. of Pipe			Cu. Ft. to 1 Ft. of Pipe			Cu. Ft. to 1 Ft. of Pipe			Cu. Ft. to 1 Ft. of Pipe			Cu. Ft. to 1 Ft. of Pipe		
	Cu. Ft. Per Ton	Dl. Ex.		Cu. Ft. Per Ton	Dl. Ex.		Cu. Ft. Per Ton	Dl. Ex.		Cu. Ft. Per Ton	Dl. Ex.		Cu. Ft. Per Ton	Dl. Ex.	
		1"	1 1/4"		1"	1 1/4"		1"	1 1/4"		1"	1 1/4"		1"	1 1/4"
12	110	1.6	2.2	103	1.3	1.7	95	1.1	1.2	830	0.9	0.4	700	0.5	0.6
20	140	1.7	2.3	125	1.4	1.8	110	1.1	1.2	1000	0.9	0.4	900	0.5	0.6
50	200	1.8	2.4	180	1.5	1.9	160	1.1	1.2	1300	0.9	0.5	1000	0.5	0.6
100	350	2.0	2.6	325	1.6	2.1	300	1.2	1.3	2150	0.9	0.5	1300	0.6	0.7
250	650	2.8	3.2	575	2.1	2.4	500	1.4	1.5	368	1.2	0.6	215	0.9	1.2
500	1100	3.2	3.6	900	2.4	2.7	700	1.6	1.7	530	1.4	0.7	360	1.1	1.5
1000	1200	3.8	4.2	1000	3.0	3.4	800	2.2	2.3	650	1.8	0.9	500	1.4	1.8
3000	2200	4.5	5.0	1800	3.5	3.9	1400	2.5	2.6	1050	2.1	1.0	700	1.6	2.2
5000	3200	5.0	5.5	2800	4.0	4.5	2400	3.1	3.2	1690	2.7	1.1	980	2.2	3.0
10000	3800	7.0	7.5	3500	5.5	5.9	3200	4.0	4.1	2230	3.4	1.8	1200	2.8	4.0
20000	4000	8.0	8.5	3700	6.4	6.9	3400	4.3	4.4	2500	4.1	2.3	1600	3.4	5.0
40000	4500	9.0	9.5	4150	7.3	7.8	3800	5.0	5.1	2900	4.8	2.8	2000	4.0	5.5
70000	5000	11.0	11.5	4500	8.8	9.3	4000	5.9	6.0	3200	5.7	3.5	2400	5.0	7.0
100000	6000	14.0	14.5	5250	11.0	11.5	4600	7.0	7.1	3650	7.0	4.5	2800	6.0	8.0