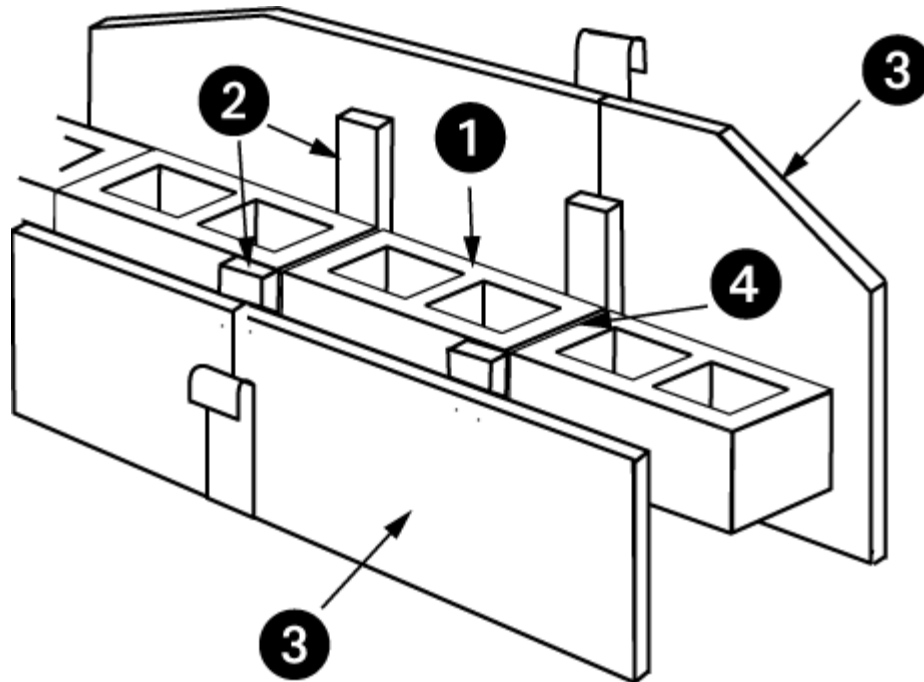


3-Hour Fire Rating

8" C.M.U.

Fire Rating: 3 Hour

No. 8-3-910505D2



Assembly Information

1. Preferred product 910505 c.m.u. 8" x 8" x 16" nominal
2. Wood or steel furring members - 16" o.c. maximum.
3. Gypsum wallboard, 3/8" thick, both sides, long dimension parallel to furring members - all joints finished.
4. ASTM C-270 Masonry Mortar, Type M or S. Face shell or full mortar bedding as required.
5. Masonry grout, reinforcing steel, joint reinforcement, anchors, ties and accessories (Not depicted above - optional). Use where specified.

Preferred Materials Inc. accepts no responsibility for proper application of the rated wall assembly above, or responsibility for the construction of such assemblies.

Fire Rating: 3 Hour No. 8-3-910505D2

Concrete Masonry Unit

Section 3.1 of ACI 216.1

Unit Description	Size WxHxL Nominal	Equivalent Thickness Inches	Fire Rating Minutes
910505	8x8x16	4.1	120.6*

** Linear interpolation from Table 3.1 of ACI 216.1 for Exposed Finish Block Mix – 55% limestone & 45% siliceous aggregates.*

Sections 3.2.2 and 3.2.3

Solid Grouted construction and/or cells filled with loose-fill materials

Included	Equivalent Thickness Inches	Fire Rating Minutes
No	4.1	120.6
Yes	N/A	N/A

** Linear interpolation from Table 3.1 of ACI 216.1 for Exposed Finish Block Mix – 55% limestone & 45% siliceous aggregates.*

Fire Rating: 3 Hour

No. 8-3-910505D2

Nonfire-exposed side

Side 1

Section 5.2.2 of ACI 216.1

Finish	
3/8 inch Gypsum Wallboard	.375
Multiplying factor Table 5.1	3
Adjusted Thickness	1.125
Concrete Masonry Unit	
Unit Description	910505
Size WxHxL Nominal	8x8x16
Equivalent Thickness	4.1
Fire Rating Minutes	120.6
Total Thickness, CMU + Finish	5.22
Fire Resistance Rating of CMU & Finish, Table 5.1	185.3*

** Linear interpolation from Table 3.1 of ACI 216.1 for Exposed Finish Block Mix – 55% limestone & 45% siliceous aggregates.*

Max. allowable assembly Fire Resistance Block + finishes	180.9
Fire-Resistance Rating of Block and Finish	180.9

Side 2

Section 5.2.2 of ACI 216.1

Finish	
3/8 inch Gypsum Wallboard	.375
Multiplying factor Table 5.1	3
Adjusted Thickness (inches)	1.125
Concrete Masonry Unit	
Unit Description	910505
Size WxHxL Nominal	8x8x16
Equivalent Thickness (inches)	4.1
Fire Rating Minutes	120.6
Total Thickness, CMU + Finish (inches)	5.22
Fire Resistance Rating of CMU & Finish, Table 5.1	185.3*

** Linear interpolation from Table 3.1 of ACI 216.1 for Exposed Finish Block Mix – 55% limestone & 45% siliceous aggregates.*

Max. allowable assembly Fire Resistance Block + finishes	180.9 5.15
Fire-Resistance Rating of Block and Finish	180.9 5.15

Fire Rating: 3 Hour No. 8-3-910505D2

Fire-exposed side

Side 1

Section 5.2.3 of ACI 216.1

Finish	
3/8 inch Gypsum Wallboard	
Time assigned to finish materials Table 5.2	10
Fire Resistance of CMU and Nonfire-exposed side Finish Table 3.1	180.9
Assembly Fire-Resistance Rating	190.9
Max. allowable assembly Fire Resistance Block + finishes	241.2
Total Assembly Fire-Resistance Rating	190.9

Side 2

Section 5.2.3 of ACI 216.1

Finish	
3/8 inch Gypsum Wallboard	
Time assigned to finish materials Table 5.2	10
Fire Resistance of CMU and Nonfire-exposed side Finish Table 3.1	180.9
Assembly Fire-Resistance Rating	190.9
Max. allowable assembly Fire Resistance Block + finishes	241.2
Total Assembly Fire-Resistance Rating	190.9

Assembly Fire-Resistance Rating	190.9 Minutes
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Fire Resistance Rating, minutes per inches of equivalent thickness
Linear Interpolation from Table 3.1 of ACI 216.1
Exposed Finish Mix - 55% limestone + 45% siliceous aggregates

et	min	et	min	et	min	et	min	et	min	et	min	et	min	et	min	et	min
2.75	60.0	3.16	76.6	3.57	94.0	3.98	114.5	4.39	137.1	4.80	160.5	5.21	184.7	5.62	212.0	6.03	239.4
2.76	60.4	3.17	77.0	3.58	94.5	3.99	115.0	4.40	137.7	4.81	161.1	5.22	185.3	5.63	212.7	6.04	240.0
2.77	60.8	3.18	77.4	3.59	95.0	4.00	115.5	4.41	138.3	4.82	161.7	5.23	186.0	5.64	213.3		
2.78	61.2	3.19	77.8	3.60	95.5	4.01	116.0	4.42	138.8	4.83	162.3	5.24	186.7	5.65	214.0		
2.79	61.6	3.20	78.2	3.61	96.0	4.02	116.5	4.43	139.4	4.84	162.8	5.25	187.3	5.66	214.7		
2.80	62.0	3.21	78.6	3.62	96.5	4.03	117.0	4.44	140.0	4.85	163.4	5.26	188.0	5.67	215.4		
2.81	62.4	3.22	79.0	3.63	97.0	4.04	117.5	4.45	140.6	4.86	164.0	5.27	188.7	5.68	216.0		
2.82	62.8	3.23	79.4	3.64	97.5	4.05	118.0	4.46	141.1	4.87	164.5	5.28	189.3	5.69	216.7		
2.83	63.2	3.24	79.8	3.65	98.0	4.06	118.5	4.47	141.7	4.88	165.1	5.29	190.0	5.70	217.4		
2.84	63.6	3.25	80.2	3.66	98.5	4.07	119.0	4.48	142.3	4.89	165.7	5.30	190.7	5.71	218.0		
2.85	64.0	3.26	80.7	3.67	99.0	4.08	119.5	4.49	142.8	4.90	166.3	5.31	191.3	5.72	218.7		
2.86	64.5	3.27	81.1	3.68	99.5	4.09	120.0	4.50	143.4	4.91	166.8	5.32	192.0	5.73	219.4		
2.87	64.9	3.28	81.5	3.69	100.0	4.10	120.6	4.51	144.0	4.92	167.4	5.33	192.7	5.74	220.0		
2.88	65.3	3.29	81.9	3.70	100.5	4.11	121.1	4.52	144.6	4.93	168.0	5.34	193.3	5.75	220.7		
2.89	65.7	3.30	82.3	3.71	101.0	4.12	121.7	4.53	145.1	4.94	168.5	5.35	194.0	5.76	221.4		
2.90	66.1	3.31	82.7	3.72	101.5	4.13	122.3	4.54	145.7	4.95	169.1	5.36	194.7	5.77	222.0		
2.91	66.5	3.32	83.1	3.73	102.0	4.14	122.9	4.55	146.3	4.96	169.7	5.37	195.3	5.78	222.7		
2.92	66.9	3.33	83.5	3.74	102.5	4.15	123.4	4.56	146.8	4.97	170.2	5.38	196.0	5.79	223.4		
2.93	67.3	3.34	83.9	3.75	103.0	4.16	124.0	4.57	147.4	4.98	170.8	5.39	196.7	5.80	224.0		
2.94	67.7	3.35	84.3	3.76	103.5	4.17	124.6	4.58	148.0	4.99	171.4	5.40	197.3	5.81	224.7		
2.95	68.1	3.36	84.7	3.77	104.0	4.18	125.1	4.59	148.5	5.00	172.0	5.41	198.0	5.82	225.4		
2.96	68.5	3.37	85.1	3.78	104.5	4.19	125.7	4.60	149.1	5.01	172.5	5.42	198.7	5.83	226.0		
2.97	68.9	3.38	85.5	3.79	105.0	4.20	126.3	4.61	149.7	5.02	173.1	5.43	199.3	5.84	226.7		
2.98	69.3	3.39	85.9	3.80	105.5	4.21	126.9	4.62	150.3	5.03	173.7	5.44	200.0	5.85	227.4		
2.99	69.7	3.40	86.3	3.81	106.0	4.22	127.4	4.63	150.8	5.04	174.2	5.45	200.7	5.86	228.0		
3.00	70.1	3.41	86.7	3.82	106.5	4.23	128.0	4.64	151.4	5.05	174.8	5.46	201.3	5.87	228.7		
3.01	70.5	3.42	87.1	3.83	107.0	4.24	128.6	4.65	152.0	5.06	175.4	5.47	202.0	5.88	229.4		
3.02	70.9	3.43	87.5	3.84	107.5	4.25	129.1	4.66	152.5	5.07	176.0	5.48	202.7	5.89	230.0		
3.03	71.3	3.44	87.9	3.85	108.0	4.26	129.7	4.67	153.1	5.08	176.5	5.49	203.3	5.90	230.7		
3.04	71.7	3.45	88.3	3.86	108.5	4.27	130.3	4.68	153.7	5.09	177.1	5.50	204.0	5.91	231.4		
3.05	72.1	3.46	88.8	3.87	109.0	4.28	130.8	4.69	154.3	5.10	177.7	5.51	204.7	5.92	232.0		
3.06	72.6	3.47	89.2	3.88	109.5	4.29	131.4	4.70	154.8	5.11	178.2	5.52	205.3	5.93	232.7		
3.07	73.0	3.48	89.6	3.89	110.0	4.30	132.0	4.71	155.4	5.12	178.8	5.53	206.0	5.94	233.4		
3.08	73.4	3.49	90.0	3.90	110.5	4.31	132.6	4.72	156.0	5.13	179.4	5.54	206.7	5.95	234.0		
3.09	73.8	3.50	90.5	3.91	111.0	4.32	133.1	4.73	156.5	5.14	180.0	5.55	207.3	5.96	234.7		
3.10	74.2	3.51	91.0	3.92	111.5	4.33	133.7	4.74	157.1	5.15	180.7	5.56	208.0	5.97	235.4		
3.11	74.6	3.52	91.5	3.93	112.0	4.34	134.3	4.75	157.7	5.16	181.3	5.57	208.7	5.98	236.0		
3.12	75.0	3.53	92.0	3.94	112.5	4.35	134.8	4.76	158.3	5.17	182.0	5.58	209.3	5.99	236.7		
3.13	75.4	3.54	92.5	3.95	113.0	4.36	135.4	4.77	158.8	5.18	182.7	5.59	210.0	6.00	237.4		
3.14	75.8	3.55	93.0	3.96	113.5	4.37	136.0	4.78	159.4	5.19	183.3	5.60	210.7	6.01	238.0		
3.15	76.2	3.56	93.5	3.97	114.0	4.38	136.6	4.79	160.0	5.20	184.0	5.61	211.3	6.02	238.7		