

## SOUND CELL STC RATING & FIRE ANALYSIS

### Sound Cell / Normal Weight C.M.U.s - Unfilled

	Equivalent Thickness	Rear Void Depth	Unit Weight*	Void Weight**	Wall Weight***	STC Rating (a)	Thickness Solid (b)	Fire Rating (c)
<b>12" Unit</b>	5.6	3.38	54.90		61.76	51		1 Hr.
<b>8" Unit</b>	4.5		43.73		49.20	49		0 Hr.

### Sound Cell / Normal Weight C.M.U.s - Filled (Rear Section)

	Equivalent Thickness	Rear Void Depth	Unit Weight*	Void Weight**	Wall Weight***	STC Rating (a)	Thickness Solid (b)	Fire Rating (d)
<b>12" Unit</b>	5.6	3.38	54.90	17.19	81.10	55	4.9	2.5 Hr.

### Sound Cell / Light-Weight C.M.U.s - Unfilled

	Equivalent Thickness	Rear Void Depth	Unit Weight*	Void Weight**	Wall Weight***	STC Rating (a)	Thickness Solid (b)	Fire Rating (c)
<b>12" Unit</b>	5.6	3.38	41.52		46.71	48		1 Hr.
<b>8" Unit</b>	4.4		33.07		37.20	47		0 Hr.

### Sound Cell Light-Weight C.M.U.s - Filled (Rear Section)

	Equivalent Thickness	Rear Void Depth	Unit Weight*	Void Weight**	Wall Weight***	STC Rating (a)	Thickness Solid (b)	Fire Rating (d)
<b>12" Unit</b>	5.6	3.38	41.52	17.19	66.05	52	4.9	3 Hr.

\*lbs.

\*\*lbs. Assumed sand/mortar weight of 97 lbs.cu.ft.

\*\*\*lbs. per sq. ft.

(a) per NCMA-Tek; 13-1 - Sound Transmission Class Ratings for Concrete Masonry Walls  
STC = 0.18W + 40 where W = wall weight in psf

(b) Equivalent Thickness of solid grouted cores and rear face shell.

(c) per ASTM E119 Fire Test of Building Construction Materials

(d) Calculated Fire-resistance Periods, Equivalent Thickness of Solid Masonry: IBC 721.3; NCMA Tek 7-1A

Sincerely,  
KERION

*Kerry L VonDross*

Kerry L. VonDross, C<sup>3</sup>M®

**Certified Consultant of Concrete Masonry**

National Concrete Masonry Association

**Former Advisor, Commercial Buildings Fire Safety Code Council**

State of Wisconsin