

Structural analysis

INTERNAL WALLS

04/2012



Internal walls (no wind pressure)

In accordance with approval Z 9.1-559
DIN 1052 (2008) and/or EN 1995-1-1 (2006)

Dead weight gk*)	Imposed load nk	Height (buckling length)															
		2,50 m				3,00 m				4,00 m							
		R 0	R 30	R 60	R 90	R 0	R 30	R 60	R 90	R 0	R 30	R 60	R 90				
10,00	10,00	60 C3s	80 C3s	80 C3s	100 C3s	60 C3s	80 C3s	80 C3s	120 C3s	60 C3s	80 C3s	100 C5s	120 C3s				
	20,00																
	30,00																
	40,00																
	50,00																
	60,00																
20,00	10,00	60 C3s	80 C3s	80 C3s	120 C3s	60 C3s	80 C3s	100 C5s	120 C3s	60 C3s	80 C3s	100 C5s	120 C3s				
	20,00																
	30,00																
	40,00																
	50,00																
	60,00			80 C3s				140 C5s				90 C3s	120 C5s	90 C3s	100 C5s		120 C5s
30,00	10,00	60 C3s	80 C3s	100 C5s	120 C3s	60 C3s	80 C3s	100 C5s	120 C3s	60 C3s	80 C3s	80 C3s	100 C5s				
	20,00																
	30,00																
	40,00																
	50,00																
	60,00			80 C3s				140 C5s				90 C3s	120 C5s	90 C3s	100 C5s		120 C5s
40,00	10,00	60 C3s	80 C3s	100 C5s	120 C3s	60 C3s	80 C3s	100 C5s	120 C3s	60 C3s	80 C3s	90 C3s					
	20,00																
	30,00																
	40,00																
	50,00			80 C3s				140 C5s				90 C3s	120 C5s	90 C3s	100 C5s		120 C5s
	60,00																
50,00	10,00	60 C3s	80 C3s	100 C5s	120 C3s	60 C3s	80 C3s	100 C5s	120 C3s	60 C3s	80 C3s	90 C3s					
	20,00																
	30,00																
	40,00																
	50,00			80 C3s				140 C5s				90 C3s	120 C5s	90 C3s	100 C5s		120 C5s
	60,00				90 C3s				100 C3s				100 C3s	120 C3s			
60,00	10,00	60 C3s	80 C3s	100 C5s	120 C3s	60 C3s	80 C3s	100 C5s	140 C5s	60 C3s	80 C3s	100 C3s					
	20,00																
	30,00																
	40,00																
	50,00																
	60,00			90 C3s				120 C5s				100 C3s	120 C3s				

* The CLT self-weight is already taken into account in the table at $\rho = 500 \text{ kg/m}^3$!

Service class 1, imposed load category A ($\psi_0 = 0.7$; $\psi_1 = 0.5$; $\psi_2 = 0.3$)

Load-bearing capacity:

- Verification as a column (compression in accordance with equivalent member method)
- Shearing stresses

$k_{mod} = 0.8$

Fire resistance

$v_{1,i} = 0.63 \text{ mm/min}$
 $v_{1,a} = 0.86 \text{ mm/min}$

R0
R30
R60
R90

This table is only for preliminary estimate purposes and is not a substitute for a structural analysis.