

Classification of Fire Performance of Wall and Ceiling Lining Materials

Using the Method of Kokkala, Thomas and Karlsson

Reference: Kokkala, M.A. Thomas, P.H. and Karlsson, B. Rate of Heat Release and Ignitability Indices for Surface Linings. Fire and Materials Vol 17, 209-216 (1993)

Instructions: User input areas are those shaded in light-blue. Before entering or pasting new data into the two columns, it is best to clear any existing data by clicking on the 'Clear Data' button. If necessary, formatting of the cells can be restored by clicking on the 'Formatting' button. **Copy data from Column C (time) of the accompanying csv file and paste into the time column of this spreadsheet. Copy data from column D (HRR) of the csv file and paste into the Rate of Heat Release column of this**

Material Identification/Description:

NRG Greenboard 40mm Render

Clear Data		Formatting	
INPUT DATA BELOW			
Data from AS/NZS 3837:1998		Time to Ignition (sec) = 131.8	
Test Heat Flux = 50 kW/m ²		Ignitability Index (1/min) = 0.455	
Time (sec)	Rate of Heat Release (kW/m ²)	End of Test (sec) = 1130	
0	1.632677949	Rate of Heat Release Index (m=0.34) = 2845.2	
5	-0.834480338	10 minute limit = 6554	
10	1.14819442	Rate of Heat Release Index (m=0.93) = 1085.5	
15	0.954231274	2 minute limit = 2400	
20	-1.653723611	12 minute limit = 1575	
25	-2.13828481		
30	0.188356137		
35	0.950865153		
40	0.459613285		
45	0.541376878		
50	-0.548740905		
55	-3.59533274		
60	-1.183736438		
65	-1.054527708		
70	-2.357453209		
75	-0.34038669		
80	-1.532492231		
85	-0.493227605		
90	1.174408817		
95	-0.063198427		
100	0.998333579		
105	1.888880429		
110	5.567024473		
115	7.338121912		
120	20.92924277		
125	34.11576757		
130	46.48187018		
135	56.40572768		
140	66.55649744		
145	73.12874249		
150	78.54884202		
155	78.01306688		
160	74.56909308		
165	72.0902181		
170	66.08915545		

THE BCA CLASSIFICATION GROUP IS:

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Group 1

This method assumes that no materials lead to flashover after 12 and before 20 minutes.

Materials that are predicted not to flashover within 12 minutes are put into Group 1.