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PREFACE

The tables are prepared for the design of load-bearing concrete constructions for fire exposure.

Since the first edition in 1981 the tables have been widely used in the education on structural fire safety at the Technical University of Denmark, at the Danish Engineering Academy and in many consulting engineering companies in Denmark and a number of other countries.

In the meantime, the method used for fast calculation of the temperatures in a fire exposed concrete section has been somewhat improved and new Fortran 77 programs have been developed for the calculation of the tables.

New print facilities have been introduced improving the readability of the tables, and the thermal diffusivity $350*10^{-9} m^2/s$ has been recommended instead of the value $348*10^{-9} m^2/s$ for Danish sea gravel, according to a proposal for the Danish Standard for Concrete Constructions, in the development of which the author has participated.

Lyngby, July 1988
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INTRODUCTION

In general the tables show the temperature T_M at the centre line of a wall exposed by fire at the two parallel surfaces, the weakening of the concrete ξ_{cM} at the centre line, and the relative average of the weakening through the cross section alias the stress distribution factor η.

The factor η is calculated by a weighted summation of the weakening ξ_c at the surface, the centre line, and nine intermediate points divided by the value ξ_{cM} at the centre line.

The tables are made for a variety of fully developed fires and for standard fires including a decay period.

For these fires values are given for two conditions: HOT and COLD.

The HOT condition is defined as the time, where the temperature in the depth 0.03 m of a semi-infinite concrete specimen is at maximum.

The temperatures used for this condition are the maximum temperatures, which have occurred previous to the time defined by the condition.

The HOT condition is used for the calculation of the resistance of a concrete cross section at the time, where the reinforcing steels are at the weakest.

The COLD condition represents the maximum weakening of the concrete approximately a week after the fire exposure, where the concrete is at the weakest.

The temperatures used for this condition are the maximum temperatures in each point during the fully developed fire course.

The relative strength reduction of the concrete in the HOT condition is assessed to be 1.0 until 200^0 C with a linear variation to 0.7 at 500^0 C and 0.0 at 850^0 C.

The relative residual strength of the concrete in the COLD condition is assessed to vary linearly from 1.0 at 0^0 C to 0.8 at 300^0 C and to 0.0 at 650^0 C.

These variations are realistic for a concrete based on Danish sea gravel aggregates (mostly granite and quartz) and to be a slightly conservative assessment for most other concretes with heavy aggregates, where the fire resistance have not been especially improved.

The tables for a standard fire including a decay period show the HOT and COLD condition for a specimen, where the load is applied throughout the cooling of a masonry furnace.

In addition, the parameters T_M, ξ_{cM} and η are tabulated for a specific time of a standard fire exposure to be used for calculating the fire resistance of a structure exposed in accordance with the ISO 834 Standard, which does not require a decay period.

Thermal Diffusivity a = $350.*10^{-9}$ m^2/s

Thickness = 0.10 m, Opening Factor = 0.02 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	194.	1.000	0.947
100. MJ/m^2	317.	0.883	0.931
150. MJ/m^2	462.	0.738	0.938
200. MJ/m^2	536.	0.628	0.889
250. MJ/m^2	563.	0.573	0.861

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	248.	0.837	0.964
100. MJ/m^2	366.	0.671	0.907
150. MJ/m^2	486.	0.403	0.901
200. MJ/m^2	572.	0.211	0.866
250. MJ/m^2	614.	0.117	0.751

Thickness = 0.10 m, Opening Factor = 0.04 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	164.	1.000	0.919
100. MJ/m^2	276.	0.924	0.876
200. MJ/m^2	455.	0.745	0.842
300. MJ/m^2	571.	0.558	0.803
400. MJ/m^2	654.	0.392	0.769
500. MJ/m^2	730.	0.240	0.769

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	257.	0.831	0.906
100. MJ/m^2	345.	0.716	0.826
200. MJ/m^2	521.	0.325	0.796
300. MJ/m^2	623.	0.097	0.699
400. MJ/m^2	708.	0.000	1.000
500. MJ/m^2	758.	0.000	1.000

Thickness = 0.10 m, Opening Factor = 0.06 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	337.	0.863	0.859
300. MJ/m^2	535.	0.630	0.801
450. MJ/m^2	689.	0.322	0.679
600. MJ/m^2	780.	0.140	0.485
750. MJ/m^2	825.	0.051	0.281

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	440.	0.505	0.866
300. MJ/m^2	583.	0.185	0.745
450. MJ/m^2	733.	0.000	1.000
600. MJ/m^2	823.	0.000	1.000
750. MJ/m^2	883.	0.000	1.000

Thermal Diffusivity $a = 350.*10^{-9}\ m^2/s$

Thickness = 0.10 m, Opening Factor = 0.08 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	259.	0.941	0.872
200. MJ/m^2	368.	0.832	0.825
400. MJ/m^2	568.	0.565	0.766
600. MJ/m^2	733.	0.235	0.582
800. MJ/m^2	819.	0.061	0.291
1000. MJ/m^2	898.	0.000	1.000

COLD Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	295.	0.803	0.811
200. MJ/m^2	476.	0.424	0.831
400. MJ/m^2	620.	0.103	0.686
600. MJ/m^2	782.	0.000	1.000
800. MJ/m^2	874.	0.000	1.000
1000. MJ/m^2	925.	0.000	1.000

Thickness = 0.10 m, Opening Factor = 0.12 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	220.	0.980	0.794
300. MJ/m^2	323.	0.877	0.745
600. MJ/m^2	549.	0.602	0.657
900. MJ/m^2	759.	0.183	0.512
1200. MJ/m^2	854.	0.000	1.000
1500. MJ/m^2	927.	0.000	1.000

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	322.	0.769	0.751
300. MJ/m^2	482.	0.411	0.776
600. MJ/m^2	638.	0.063	0.574
900. MJ/m^2	804.	0.000	1.000
1200. MJ/m^2	889.	0.000	1.000
1500. MJ/m^2	978.	0.000	1.000

Thermal Diffusivity a = $350.*10^{-9}$ m^2/s

Thickness = 0.15 m, Opening Factor = 0.02 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	53.	1.000	0.968
100. MJ/m^2	123.	1.000	0.921
150. MJ/m^2	255.	0.945	0.885
200. MJ/m^2	328.	0.872	0.863
250. MJ/m^2	347.	0.853	0.836

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	153.	0.905	0.950
100. MJ/m^2	236.	0.845	0.898
150. MJ/m^2	341.	0.726	0.850
200. MJ/m^2	433.	0.520	0.823
250. MJ/m^2	476.	0.426	0.798

Thickness = 0.15 m, Opening Factor = 0.04 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.946
100. MJ/m^2	64.	1.000	0.897
200. MJ/m^2	184.	1.000	0.814
300. MJ/m^2	290.	0.910	0.800
400. MJ/m^2	397.	0.803	0.768
500. MJ/m^2	499.	0.701	0.715

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	134.	0.919	0.900
100. MJ/m^2	238.	0.844	0.854
200. MJ/m^2	381.	0.637	0.836
300. MJ/m^2	435.	0.515	0.769
400. MJ/m^2	547.	0.267	0.737
500. MJ/m^2	608.	0.131	0.660

Thickness = 0.15 m, Opening Factor = 0.06 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	92.	1.000	0.861
300. MJ/m^2	243.	0.957	0.783
450. MJ/m^2	366.	0.834	0.726
600. MJ/m^2	472.	0.728	0.660
750. MJ/m^2	546.	0.608	0.586

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	270.	0.821	0.814
300. MJ/m^2	435.	0.516	0.811
450. MJ/m^2	514.	0.340	0.702
600. MJ/m^2	618.	0.108	0.623
750. MJ/m^2	712.	0.000	1.000

Thermal Diffusivity $a = 350.*10^{-9}\ m^2/s$

Thickness = 0.15 m, Opening Factor = 0.08 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	55.	1.000	0.898
200. MJ/m^2	100.	1.000	0.830
400. MJ/m^2	258.	0.942	0.758
600. MJ/m^2	391.	0.809	0.687
800. MJ/m^2	492.	0.708	0.602
1000. MJ/m^2	614.	0.472	0.559

COLD Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	125.	0.925	0.820
200. MJ/m^2	293.	0.805	0.778
400. MJ/m^2	465.	0.450	0.807
600. MJ/m^2	553.	0.253	0.677
800. MJ/m^2	661.	0.000	1.000
1000. MJ/m^2	738.	0.000	1.000

Thickness = 0.15 m, Opening Factor = 0.12 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.857
300. MJ/m^2	48.	1.000	0.796
600. MJ/m^2	201.	0.999	0.692
900. MJ/m^2	398.	0.802	0.663
1200. MJ/m^2	518.	0.663	0.596
1500. MJ/m^2	618.	0.464	0.502

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	137.	0.916	0.779
300. MJ/m^2	283.	0.812	0.734
600. MJ/m^2	460.	0.461	0.736
900. MJ/m^2	602.	0.144	0.876
1200. MJ/m^2	667.	0.000	1.000
1500. MJ/m^2	784.	0.000	1.000

Thermal Diffusivity a = $350.*10^{-9}$ m^2/s

Thickness = 0.20 m, Opening Factor = 0.02 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.975
100. MJ/m^2	28.	1.000	0.941
150. MJ/m^2	108.	1.000	0.900
200. MJ/m^2	158.	1.000	0.854
250. MJ/m^2	169.	1.000	0.830

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	86.	0.953	0.937
100. MJ/m^2	183.	0.883	0.911
150. MJ/m^2	240.	0.843	0.857
200. MJ/m^2	311.	0.793	0.790
250. MJ/m^2	350.	0.706	0.783

Thickness = 0.20 m, Opening Factor = 0.04 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.958
100. MJ/m^2	20.	1.000	0.920
200. MJ/m^2	42.	1.000	0.863
300. MJ/m^2	106.	1.000	0.821
400. MJ/m^2	190.	1.000	0.766
500. MJ/m^2	278.	0.922	0.751

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	55.	0.975	0.889
100. MJ/m^2	145.	0.911	0.859
200. MJ/m^2	270.	0.821	0.812
300. MJ/m^2	346.	0.714	0.800
400. MJ/m^2	405.	0.582	0.733
500. MJ/m^2	459.	0.463	0.725

Thickness = 0.20 m, Opening Factor = 0.06 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.894
300. MJ/m^2	68.	1.000	0.827
450. MJ/m^2	146.	1.000	0.744
600. MJ/m^2	228.	0.972	0.694
750. MJ/m^2	291.	0.909	0.672

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	155.	0.903	0.824
300. MJ/m^2	308.	0.800	0.767
450. MJ/m^2	413.	0.566	0.765
600. MJ/m^2	490.	0.393	0.755
750. MJ/m^2	543.	0.276	0.667

Thermal Diffusivity a = $350.*10^{-9}$ m^2/s

Thickness = 0.20 m, Opening Factor = 0.08 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.920
200. MJ/m^2	20.	1.000	0.868
400. MJ/m^2	72.	1.000	0.802
600. MJ/m^2	157.	1.000	0.714
800. MJ/m^2	235.	0.965	0.664
1000. MJ/m^2	345.	0.855	0.645

COLD Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	40.	0.986	0.830
200. MJ/m^2	169.	0.894	0.796
400. MJ/m^2	328.	0.754	0.756
600. MJ/m^2	448.	0.488	0.760
800. MJ/m^2	533.	0.298	0.779
1000. MJ/m^2	564.	0.230	0.653

Thickness = 0.20 m, Opening Factor = 0.12 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.891
300. MJ/m^2	20.	1.000	0.845
600. MJ/m^2	32.	1.000	0.775
900. MJ/m^2	154.	1.000	0.697
1200. MJ/m^2	254.	0.946	0.656
1500. MJ/m^2	334.	0.866	0.615

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	44.	0.983	0.801
300. MJ/m^2	144.	0.911	0.758
600. MJ/m^2	322.	0.767	0.728
900. MJ/m^2	458.	0.465	0.731
1200. MJ/m^2	547.	0.266	0.803
1500. MJ/m^2	603.	0.143	0.638

Thermal Diffusivity $a = 350.*10^{-9}\ m^2/s$

Thickness = 0.25 m, Opening Factor = 0.02 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.980
100. MJ/m^2	20.	1.000	0.952
150. MJ/m^2	34.	1.000	0.919
200. MJ/m^2	66.	1.000	0.886
250. MJ/m^2	73.	1.000	0.868

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	42.	0.984	0.927
100. MJ/m^2	130.	0.921	0.911
150. MJ/m^2	192.	0.877	0.876
200. MJ/m^2	234.	0.847	0.824
250. MJ/m^2	259.	0.829	0.795

Thickness = 0.25 m, Opening Factor = 0.04 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.965
100. MJ/m^2	20.	1.000	0.934
200. MJ/m^2	20.	1.000	0.889
300. MJ/m^2	22.	1.000	0.856
400. MJ/m^2	74.	1.000	0.818
500. MJ/m^2	128.	1.000	0.781

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.893
100. MJ/m^2	79.	0.958	0.862
200. MJ/m^2	190.	0.879	0.826
300. MJ/m^2	265.	0.825	0.797
400. MJ/m^2	342.	0.723	0.785
500. MJ/m^2	354.	0.698	0.724

Thickness = 0.25 m, Opening Factor = 0.06 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.915
300. MJ/m^2	20.	1.000	0.860
450. MJ/m^2	35.	1.000	0.796
600. MJ/m^2	84.	1.000	0.752
750. MJ/m^2	129.	1.000	0.715

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	75.	0.961	0.827
300. MJ/m^2	215.	0.861	0.795
450. MJ/m^2	315.	0.784	0.745
600. MJ/m^2	394.	0.607	0.747
750. MJ/m^2	459.	0.464	0.730

Thermal Diffusivity $a = 350.*10^{-9}$ m^2/s

Thickness = 0.25 m, Opening Factor = 0.08 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.934
200. MJ/m^2	20.	1.000	0.893
400. MJ/m^2	20.	1.000	0.842
600. MJ/m^2	38.	1.000	0.775
800. MJ/m^2	85.	1.000	0.727
1000. MJ/m^2	157.	1.000	0.680

COLD Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.854
200. MJ/m^2	81.	0.956	0.804
400. MJ/m^2	230.	0.850	0.774
600. MJ/m^2	341.	0.727	0.738
800. MJ/m^2	426.	0.537	0.738
1000. MJ/m^2	485.	0.404	0.751

Thickness = 0.25 m, Opening Factor = 0.12 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.911
300. MJ/m^2	20.	1.000	0.874
600. MJ/m^2	20.	1.000	0.822
900. MJ/m^2	32.	1.000	0.761
1200. MJ/m^2	91.	1.000	0.715
1500. MJ/m^2	148.	1.000	0.659

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.833
300. MJ/m^2	59.	0.972	0.778
600. MJ/m^2	209.	0.865	0.740
900. MJ/m^2	341.	0.725	0.722
1200. MJ/m^2	433.	0.520	0.728
1500. MJ/m^2	521.	0.324	0.765

Thermal Diffusivity $a = 350.*10^{-9}\ m^2/s$

Thickness = 0.30 m, Opening Factor = 0.02 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.982
100. MJ/m^2	20.	1.000	0.959
150. MJ/m^2	20.	1.000	0.932
200. MJ/m^2	20.	1.000	0.905
250. MJ/m^2	24.	1.000	0.889

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.926
100. MJ/m^2	87.	0.952	0.906
150. MJ/m^2	150.	0.907	0.881
200. MJ/m^2	177.	0.888	0.835
250. MJ/m^2	196.	0.874	0.812

Thickness = 0.30 m, Opening Factor = 0.04 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.970
100. MJ/m^2	20.	1.000	0.943
200. MJ/m^2	20.	1.000	0.907
300. MJ/m^2	20.	1.000	0.878
400. MJ/m^2	20.	1.000	0.848
500. MJ/m^2	49.	1.000	0.816

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.911
100. MJ/m^2	33.	0.991	0.860
200. MJ/m^2	115.	0.932	0.825
300. MJ/m^2	195.	0.875	0.811
400. MJ/m^2	278.	0.816	0.780
500. MJ/m^2	309.	0.797	0.744

Thickness = 0.30 m, Opening Factor = 0.06 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.927
300. MJ/m^2	20.	1.000	0.882
450. MJ/m^2	20.	1.000	0.832
600. MJ/m^2	20.	1.000	0.792
750. MJ/m^2	40.	1.000	0.764

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	26.	0.995	0.833
300. MJ/m^2	131.	0.921	0.799
450. MJ/m^2	233.	0.848	0.760
600. MJ/m^2	306.	0.803	0.715
750. MJ/m^2	381.	0.638	0.739

Thermal Diffusivity a = $350.*10^{-9}$ m^2/s

Thickness = 0.30 m, Opening Factor = 0.08 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.940
200. MJ/m^2	20.	1.000	0.911
400. MJ/m^2	20.	1.000	0.865
600. MJ/m^2	20.	1.000	0.811
800. MJ/m^2	20.	1.000	0.772
1000. MJ/m^2	55.	1.000	0.736

COLD Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.875
200. MJ/m^2	29.	0.994	0.813
400. MJ/m^2	139.	0.915	0.779
600. MJ/m^2	252.	0.834	0.736
800. MJ/m^2	330.	0.750	0.714
1000. MJ/m^2	395.	0.606	0.726

Thickness = 0.30 m, Opening Factor = 0.12 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.921
300. MJ/m^2	20.	1.000	0.895
600. MJ/m^2	20.	1.000	0.850
900. MJ/m^2	20.	1.000	0.801
1200. MJ/m^2	20.	1.000	0.764
1500. MJ/m^2	45.	1.000	0.717

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.859
300. MJ/m^2	20.	1.000	0.799
600. MJ/m^2	123.	0.926	0.747
900. MJ/m^2	238.	0.844	0.718
1200. MJ/m^2	331.	0.748	0.707
1500. MJ/m^2	423.	0.542	0.718

Thermal Diffusivity a = $350.*10^{-9}$ m^2/s

Thickness = 0.35 m, Opening Factor = 0.02 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.984
100. MJ/m^2	20.	1.000	0.964
150. MJ/m^2	20.	1.000	0.940
200. MJ/m^2	20.	1.000	0.918
250. MJ/m^2	20.	1.000	0.905

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.936
100. MJ/m^2	54.	0.976	0.904
150. MJ/m^2	115.	0.932	0.886
200. MJ/m^2	155.	0.904	0.854
250. MJ/m^2	166.	0.896	0.831

Thickness = 0.35 m, Opening Factor = 0.04 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.972
100. MJ/m^2	20.	1.000	0.949
200. MJ/m^2	20.	1.000	0.920
300. MJ/m^2	20.	1.000	0.895
400. MJ/m^2	20.	1.000	0.867
500. MJ/m^2	20.	1.000	0.843

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.921
100. MJ/m^2	20.	1.000	0.873
200. MJ/m^2	71.	0.963	0.831
300. MJ/m^2	138.	0.915	0.822
400. MJ/m^2	210.	0.864	0.791
500. MJ/m^2	254.	0.833	0.774

Thickness = 0.35 m, Opening Factor = 0.06 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.934
300. MJ/m^2	20.	1.000	0.897
450. MJ/m^2	20.	1.000	0.853
600. MJ/m^2	20.	1.000	0.823
750. MJ/m^2	20.	1.000	0.797

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.852
300. MJ/m^2	83.	0.955	0.808
450. MJ/m^2	164.	0.897	0.770
600. MJ/m^2	239.	0.844	0.742
750. MJ/m^2	308.	0.799	0.717

Thermal Diffusivity a = $350.*10^{-9}$ m^2/s

Thickness = 0.35 m, Opening Factor = 0.08 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.947
200. MJ/m^2	20.	1.000	0.920
400. MJ/m^2	20.	1.000	0.882
600. MJ/m^2	20.	1.000	0.839
800. MJ/m^2	20.	1.000	0.805
1000. MJ/m^2	20.	1.000	0.774

COLD Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.892
200. MJ/m^2	20.	1.000	0.839
400. MJ/m^2	88.	0.951	0.793
600. MJ/m^2	179.	0.886	0.750
800. MJ/m^2	257.	0.830	0.724
1000. MJ/m^2	314.	0.786	0.708

Thickness = 0.35 m, Opening Factor = 0.12 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.929
300. MJ/m^2	20.	1.000	0.909
600. MJ/m^2	20.	1.000	0.869
900. MJ/m^2	20.	1.000	0.830
1200. MJ/m^2	20.	1.000	0.798
1500. MJ/m^2	20.	1.000	0.758

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.879
300. MJ/m^2	20.	1.000	0.831
600. MJ/m^2	63.	0.969	0.766
900. MJ/m^2	166.	0.895	0.737
1200. MJ/m^2	249.	0.836	0.717
1500. MJ/m^2	337.	0.735	0.695

Thermal Diffusivity $a = 350.*10^{-9}\ m^2/s$

Thickness = 0.40 m, Opening Factor = 0.02 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.986
100. MJ/m^2	20.	1.000	0.969
150. MJ/m^2	20.	1.000	0.947
200. MJ/m^2	20.	1.000	0.927
250. MJ/m^2	20.	1.000	0.916

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.942
100. MJ/m^2	30.	0.993	0.905
150. MJ/m^2	82.	0.956	0.885
200. MJ/m^2	125.	0.925	0.863
250. MJ/m^2	135.	0.918	0.841

Thickness = 0.40 m, Opening Factor = 0.04 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.975
100. MJ/m^2	20.	1.000	0.955
200. MJ/m^2	20.	1.000	0.928
300. MJ/m^2	20.	1.000	0.907
400. MJ/m^2	20.	1.000	0.883
500. MJ/m^2	20.	1.000	0.860

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.928
100. MJ/m^2	20.	1.000	0.886
200. MJ/m^2	37.	0.988	0.839
300. MJ/m^2	94.	0.947	0.824
400. MJ/m^2	169.	0.893	0.808
500. MJ/m^2	204.	0.869	0.789

Thickness = 0.40 m, Opening Factor = 0.06 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.940
300. MJ/m^2	20.	1.000	0.911
450. MJ/m^2	20.	1.000	0.869
600. MJ/m^2	20.	1.000	0.846
750. MJ/m^2	20.	1.000	0.825

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.868
300. MJ/m^2	42.	0.985	0.814
450. MJ/m^2	111.	0.935	0.781
600. MJ/m^2	178.	0.887	0.752
750. MJ/m^2	246.	0.839	0.737

Thermal Diffusivity a = $350.*10^{-9}$ m^2/s

Thickness = 0.40 m, Opening Factor = 0.08 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.952
200. MJ/m^2	20.	1.000	0.927
400. MJ/m^2	20.	1.000	0.897
600. MJ/m^2	20.	1.000	0.857
800. MJ/m^2	20.	1.000	0.832
1000. MJ/m^2	20.	1.000	0.802

COLD Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.905
200. MJ/m^2	20.	1.000	0.855
400. MJ/m^2	44.	0.983	0.800
600. MJ/m^2	120.	0.929	0.759
800. MJ/m^2	191.	0.878	0.740
1000. MJ/m^2	235.	0.846	0.715

Thickness = 0.40 m, Opening Factor = 0.12 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.934
300. MJ/m^2	20.	1.000	0.918
600. MJ/m^2	20.	1.000	0.886
900. MJ/m^2	20.	1.000	0.851
1200. MJ/m^2	20.	1.000	0.824
1500. MJ/m^2	20.	1.000	0.789

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.893
300. MJ/m^2	20.	1.000	0.850
600. MJ/m^2	24.	0.997	0.777
900. MJ/m^2	106.	0.938	0.742
1200. MJ/m^2	181.	0.885	0.729
1500. MJ/m^2	252.	0.834	0.697

Thermal Diffusivity a = $350.*10^{-9}$ m^2/s

Thickness = 0.45 m, Opening Factor = 0.02 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.987
100. MJ/m^2	20.	1.000	0.972
150. MJ/m^2	20.	1.000	0.951
200. MJ/m^2	20.	1.000	0.934
250. MJ/m^2	20.	1.000	0.925

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.947
100. MJ/m^2	20.	1.000	0.910
150. MJ/m^2	56.	0.974	0.885
200. MJ/m^2	93.	0.948	0.862
250. MJ/m^2	108.	0.937	0.847

Thickness = 0.45 m, Opening Factor = 0.04 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.977
100. MJ/m^2	20.	1.000	0.958
200. MJ/m^2	20.	1.000	0.933
300. MJ/m^2	20.	1.000	0.918
400. MJ/m^2	20.	1.000	0.895
500. MJ/m^2	20.	1.000	0.877

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.933
100. MJ/m^2	20.	1.000	0.900
200. MJ/m^2	20.	1.000	0.845
300. MJ/m^2	57.	0.974	0.827
400. MJ/m^2	128.	0.923	0.815
500. MJ/m^2	163.	0.898	0.804

Thickness = 0.45 m, Opening Factor = 0.06 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.946
300. MJ/m^2	20.	1.000	0.918
450. MJ/m^2	20.	1.000	0.883
600. MJ/m^2	20.	1.000	0.860
750. MJ/m^2	20.	1.000	0.843

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.882
300. MJ/m^2	20.	1.000	0.825
450. MJ/m^2	67.	0.966	0.789
600. MJ/m^2	126.	0.924	0.764
750. MJ/m^2	189.	0.879	0.749

Thermal Diffusivity $a = 350.*10^{-9}\ m^2/s$

Thickness = 0.45 m, Opening Factor = 0.08 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.954
200. MJ/m^2	20.	1.000	0.934
400. MJ/m^2	20.	1.000	0.908
600. MJ/m^2	20.	1.000	0.872
800. MJ/m^2	20.	1.000	0.849
1000. MJ/m^2	20.	1.000	0.827

COLD Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.913
200. MJ/m^2	20.	1.000	0.870
400. MJ/m^2	20.	1.000	0.811
600. MJ/m^2	73.	0.962	0.771
800. MJ/m^2	136.	0.917	0.743
1000. MJ/m^2	188.	0.880	0.733

Thickness = 0.45 m, Opening Factor = 0.12 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.937
300. MJ/m^2	20.	1.000	0.926
600. MJ/m^2	20.	1.000	0.897
900. MJ/m^2	20.	1.000	0.868
1200. MJ/m^2	20.	1.000	0.844
1500. MJ/m^2	20.	1.000	0.814

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.905
300. MJ/m^2	20.	1.000	0.866
600. MJ/m^2	20.	1.000	0.802
900. MJ/m^2	60.	0.971	0.758
1200. MJ/m^2	121.	0.928	0.733
1500. MJ/m^2	201.	0.870	0.717

Thermal Diffusivity $a = 350.*10^{-9}\ m^2/s$

Thickness = 0.50 m, Opening Factor = 0.02 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.989
100. MJ/m^2	20.	1.000	0.973
150. MJ/m^2	20.	1.000	0.955
200. MJ/m^2	20.	1.000	0.939
250. MJ/m^2	20.	1.000	0.931

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.951
100. MJ/m^2	20.	1.000	0.917
150. MJ/m^2	35.	0.989	0.885
200. MJ/m^2	73.	0.962	0.870
250. MJ/m^2	87.	0.952	0.854

Thickness = 0.50 m, Opening Factor = 0.04 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.978
100. MJ/m^2	20.	1.000	0.960
200. MJ/m^2	20.	1.000	0.939
300. MJ/m^2	20.	1.000	0.923
400. MJ/m^2	20.	1.000	0.906
500. MJ/m^2	20.	1.000	0.886

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.938
100. MJ/m^2	20.	1.000	0.909
200. MJ/m^2	20.	1.000	0.859
300. MJ/m^2	33.	0.991	0.834
400. MJ/m^2	93.	0.948	0.819
500. MJ/m^2	124.	0.926	0.808

Thickness = 0.50 m, Opening Factor = 0.06 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.948
300. MJ/m^2	20.	1.000	0.924
450. MJ/m^2	20.	1.000	0.894
600. MJ/m^2	20.	1.000	0.873
750. MJ/m^2	20.	1.000	0.857

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.893
300. MJ/m^2	20.	1.000	0.843
450. MJ/m^2	39.	0.986	0.796
600. MJ/m^2	86.	0.953	0.774
750. MJ/m^2	143.	0.912	0.752

Thermal Diffusivity $a = 350.*10^{-9}\ m^2/s$

Thickness = 0.50 m, Opening Factor = 0.08 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.956
200. MJ/m^2	20.	1.000	0.938
400. MJ/m^2	20.	1.000	0.915
600. MJ/m^2	20.	1.000	0.887
800. MJ/m^2	20.	1.000	0.863
1000. MJ/m^2	20.	1.000	0.844

COLD Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.920
200. MJ/m^2	20.	1.000	0.883
400. MJ/m^2	20.	1.000	0.832
600. MJ/m^2	42.	0.984	0.782
800. MJ/m^2	92.	0.948	0.753
1000. MJ/m^2	141.	0.914	0.741

Thickness = 0.50 m, Opening Factor = 0.12 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.940
300. MJ/m^2	20.	1.000	0.929
600. MJ/m^2	20.	1.000	0.909
900. MJ/m^2	20.	1.000	0.880
1200. MJ/m^2	20.	1.000	0.858
1500. MJ/m^2	20.	1.000	0.835

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.916
300. MJ/m^2	20.	1.000	0.879
600. MJ/m^2	20.	1.000	0.826
900. MJ/m^2	30.	0.993	0.767
1200. MJ/m^2	81.	0.957	0.742
1500. MJ/m^2	151.	0.907	0.729

Thermal Diffusivity a = $350.*10^{-9}$ m^2/s

Thickness = 0.55 m, Opening Factor = 0.02 $m^{\frac{1}{2}}$

	Fire Load	T_M	ξ_{cM}	η
HOT				
	75. MJ/m^2	20.	1.000	0.989
	100. MJ/m^2	20.	1.000	0.975
	150. MJ/m^2	20.	1.000	0.959
	200. MJ/m^2	20.	1.000	0.943
	250. MJ/m^2	20.	1.000	0.935
COLD	Fire Load	T_M	ξ_{cM}	η
	75. MJ/m^2	20.	1.000	0.954
	100. MJ/m^2	20.	1.000	0.923
	150. MJ/m^2	22.	0.999	0.888
	200. MJ/m^2	54.	0.976	0.870
	250. MJ/m^2	66.	0.967	0.860

Thickness = 0.55 m, Opening Factor = 0.04 $m^{\frac{1}{2}}$

	Fire Load	T_M	ξ_{cM}	η
HOT				
	75. MJ/m^2	20.	1.000	0.980
	100. MJ/m^2	20.	1.000	0.962
	200. MJ/m^2	20.	1.000	0.943
	300. MJ/m^2	20.	1.000	0.928
	400. MJ/m^2	20.	1.000	0.913
	500. MJ/m^2	20.	1.000	0.896
COLD	Fire Load	T_M	ξ_{cM}	η
	75. MJ/m^2	20.	1.000	0.941
	100. MJ/m^2	20.	1.000	0.914
	200. MJ/m^2	20.	1.000	0.871
	300. MJ/m^2	20.	1.000	0.842
	400. MJ/m^2	64.	0.969	0.823
	500. MJ/m^2	93.	0.948	0.812

Thickness = 0.55 m, Opening Factor = 0.06 $m^{\frac{1}{2}}$

	Fire Load	T_M	ξ_{cM}	η
HOT				
	150. MJ/m^2	20.	1.000	0.951
	300. MJ/m^2	20.	1.000	0.929
	450. MJ/m^2	20.	1.000	0.903
	600. MJ/m^2	20.	1.000	0.885
	750. MJ/m^2	20.	1.000	0.869
COLD	Fire Load	T_M	ξ_{cM}	η
	150. MJ/m^2	20.	1.000	0.902
	300. MJ/m^2	20.	1.000	0.856
	450. MJ/m^2	20.	1.000	0.808
	600. MJ/m^2	54.	0.975	0.781
	750. MJ/m^2	104.	0.940	0.764

Thermal Diffusivity a = $350.*10^{-9}$ m^2/s

Thickness = 0.55 m, Opening Factor = 0.08 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.957
200. MJ/m^2	20.	1.000	0.941
400. MJ/m^2	20.	1.000	0.921
600. MJ/m^2	20.	1.000	0.894
800. MJ/m^2	20.	1.000	0.876
1000. MJ/m^2	20.	1.000	0.857

COLD Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.922
200. MJ/m^2	20.	1.000	0.894
400. MJ/m^2	20.	1.000	0.846
600. MJ/m^2	20.	1.000	0.790
800. MJ/m^2	59.	0.972	0.765
1000. MJ/m^2	92.	0.948	0.741

Thickness = 0.55 m, Opening Factor = 0.12 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.943
300. MJ/m^2	20.	1.000	0.932
600. MJ/m^2	20.	1.000	0.917
900. MJ/m^2	20.	1.000	0.890
1200. MJ/m^2	20.	1.000	0.872
1500. MJ/m^2	20.	1.000	0.848

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.920
300. MJ/m^2	20.	1.000	0.890
600. MJ/m^2	20.	1.000	0.841
900. MJ/m^2	20.	1.000	0.785
1200. MJ/m^2	48.	0.980	0.757
1500. MJ/m^2	99.	0.944	0.727

Thermal Diffusivity $a = 350.*10^{-9}$ m^2/s

Thickness = 0.60 m, Opening Factor = 0.02 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.989
100. MJ/m^2	20.	1.000	0.976
150. MJ/m^2	20.	1.000	0.962
200. MJ/m^2	20.	1.000	0.947
250. MJ/m^2	20.	1.000	0.940

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.957
100. MJ/m^2	20.	1.000	0.928
150. MJ/m^2	20.	1.000	0.896
200. MJ/m^2	37.	0.988	0.871
250. MJ/m^2	46.	0.982	0.861

Thickness = 0.60 m, Opening Factor = 0.04 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.981
100. MJ/m^2	20.	1.000	0.964
200. MJ/m^2	20.	1.000	0.945
300. MJ/m^2	20.	1.000	0.933
400. MJ/m^2	20.	1.000	0.920
500. MJ/m^2	20.	1.000	0.904

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.944
100. MJ/m^2	20.	1.000	0.919
200. MJ/m^2	20.	1.000	0.881
300. MJ/m^2	20.	1.000	0.853
400. MJ/m^2	38.	0.987	0.826
500. MJ/m^2	65.	0.968	0.814

Thickness = 0.60 m, Opening Factor = 0.06 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.952
300. MJ/m^2	20.	1.000	0.935
450. MJ/m^2	20.	1.000	0.910
600. MJ/m^2	20.	1.000	0.893
750. MJ/m^2	20.	1.000	0.880

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.910
300. MJ/m^2	20.	1.000	0.867
450. MJ/m^2	20.	1.000	0.824
600. MJ/m^2	30.	0.993	0.789
750. MJ/m^2	71.	0.963	0.773

Thermal Diffusivity $a = 350.*10^{-9}\ m^2/s$

Thickness = 0.60 m, Opening Factor = 0.08 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.959
200. MJ/m^2	20.	1.000	0.943
400. MJ/m^2	20.	1.000	0.926
600. MJ/m^2	20.	1.000	0.902
800. MJ/m^2	20.	1.000	0.885
1000. MJ/m^2	20.	1.000	0.869

COLD Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.926
200. MJ/m^2	20.	1.000	0.902
400. MJ/m^2	20.	1.000	0.857
600. MJ/m^2	20.	1.000	0.808
800. MJ/m^2	33.	0.991	0.772
1000. MJ/m^2	65.	0.968	0.756

Thickness = 0.60 m, Opening Factor = 0.12 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.945
300. MJ/m^2	20.	1.000	0.935
600. MJ/m^2	20.	1.000	0.923
900. MJ/m^2	20.	1.000	0.898
1200. MJ/m^2	20.	1.000	0.882
1500. MJ/m^2	20.	1.000	0.861

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.924
300. MJ/m^2	20.	1.000	0.901
600. MJ/m^2	20.	1.000	0.853
900. MJ/m^2	20.	1.000	0.804
1200. MJ/m^2	24.	0.997	0.765
1500. MJ/m^2	70.	0.964	0.737

Thermal Diffusivity $a = 520.*10^{-9}\ m^2/s$

Thickness = 0.10 m, Opening Factor = 0.02 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	251.	0.949	0.957
100. MJ/m^2	387.	0.813	0.950
150. MJ/m^2	515.	0.670	0.933
200. MJ/m^2	613.	0.474	0.969
250. MJ/m^2	644.	0.411	0.919

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	279.	0.815	0.958
100. MJ/m^2	421.	0.548	0.913
150. MJ/m^2	532.	0.299	0.910
200. MJ/m^2	618.	0.108	0.921
250. MJ/m^2	659.	0.000	1.000

Thickness = 0.10 m, Opening Factor = 0.04 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	246.	0.954	0.919
100. MJ/m^2	382.	0.818	0.904
200. MJ/m^2	567.	0.567	0.843
300. MJ/m^2	647.	0.406	0.816
400. MJ/m^2	724.	0.251	0.790
500. MJ/m^2	785.	0.129	0.738

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	315.	0.784	0.915
100. MJ/m^2	421.	0.547	0.846
200. MJ/m^2	606.	0.136	0.746
300. MJ/m^2	689.	0.000	1.000
400. MJ/m^2	757.	0.000	1.000
500. MJ/m^2	799.	0.000	1.000

Thickness = 0.10 m, Opening Factor = 0.06 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	434.	0.766	0.871
300. MJ/m^2	614.	0.473	0.774
450. MJ/m^2	775.	0.149	0.574
600. MJ/m^2	839.	0.021	0.205
750. MJ/m^2	912.	0.000	1.000

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	516.	0.335	0.926
300. MJ/m^2	668.	0.000	1.000
450. MJ/m^2	807.	0.000	1.000
600. MJ/m^2	866.	0.000	1.000
750. MJ/m^2	929.	0.000	1.000

Thermal Diffusivity a = $520.*10^{-9}$ m^2/s

Thickness = 0.10 m, Opening Factor = 0.08 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	292.	0.908	0.864
200. MJ/m^2	474.	0.726	0.821
400. MJ/m^2	650.	0.399	0.713
600. MJ/m^2	823.	0.054	0.317
800. MJ/m^2	906.	0.000	1.000
1000. MJ/m^2	952.	0.000	1.000

COLD Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	378.	0.643	0.836
200. MJ/m^2	558.	0.242	0.909
400. MJ/m^2	715.	0.000	1.000
600. MJ/m^2	858.	0.000	1.000
800. MJ/m^2	933.	0.000	1.000
1000. MJ/m^2	974.	0.000	1.000

Thickness = 0.10 m, Opening Factor = 0.12 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	305.	0.895	0.793
300. MJ/m^2	462.	0.738	0.739
600. MJ/m^2	704.	0.291	0.607
900. MJ/m^2	824.	0.052	0.253
1200. MJ/m^2	928.	0.000	1.000
1500. MJ/m^2	1002	0.000	1.000

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	410.	0.573	0.773
300. MJ/m^2	574.	0.207	0.843
600. MJ/m^2	755.	0.000	1.000
900. MJ/m^2	893.	0.000	1.000
1200. MJ/m^2	953.	0.000	1.000
1500. MJ/m^2	1027	0.000	1.000

Thermal Diffusivity a = $520.*10^{-9}$ m^2/s

Thickness = 0.15 m, Opening Factor = 0.02 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	99.	1.000	0.962
100. MJ/m^2	193.	1.000	0.897
150. MJ/m^2	339.	0.861	0.901
200. MJ/m^2	463.	0.737	0.889
250. MJ/m^2	482.	0.718	0.845

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	202.	0.870	0.957
100. MJ/m^2	298.	0.802	0.894
150. MJ/m^2	417.	0.557	0.874
200. MJ/m^2	511.	0.348	0.850
250. MJ/m^2	552.	0.256	0.812

Thickness = 0.15 m, Opening Factor = 0.04 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	65.	1.000	0.934
100. MJ/m^2	150.	1.000	0.872
200. MJ/m^2	301.	0.899	0.823
300. MJ/m^2	400.	0.800	0.795
400. MJ/m^2	530.	0.641	0.737
500. MJ/m^2	614.	0.472	0.719

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	195.	0.875	0.906
100. MJ/m^2	297.	0.802	0.839
200. MJ/m^2	431.	0.526	0.795
300. MJ/m^2	527.	0.310	0.753
400. MJ/m^2	639.	0.062	0.521
500. MJ/m^2	693.	0.000	1.000

Thickness = 0.15 m, Opening Factor = 0.06 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	172.	1.000	0.832
300. MJ/m^2	320.	0.880	0.779
450. MJ/m^2	498.	0.702	0.670
600. MJ/m^2	595.	0.511	0.595
750. MJ/m^2	724.	0.253	0.505

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	359.	0.686	0.835
300. MJ/m^2	510.	0.348	0.837
450. MJ/m^2	622.	0.099	0.621
600. MJ/m^2	732.	0.000	1.000
750. MJ/m^2	809.	0.000	1.000

Thermal Diffusivity a = $520.*10^{-9}$ m^2/s

Thickness = 0.15 m, Opening Factor = 0.08 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	66.	1.000	0.879
200. MJ/m^2	187.	1.000	0.790
400. MJ/m^2	340.	0.860	0.749
600. MJ/m^2	531.	0.639	0.624
800. MJ/m^2	663.	0.374	0.532
1000. MJ/m^2	743.	0.213	0.430

COLD Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	210.	0.864	0.822
200. MJ/m^2	389.	0.620	0.805
400. MJ/m^2	546.	0.270	0.844
600. MJ/m^2	660.	0.000	1.000
800. MJ/m^2	771.	0.000	1.000
1000. MJ/m^2	847.	0.000	1.000

Thickness = 0.15 m, Opening Factor = 0.12 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	53.	1.000	0.830
300. MJ/m^2	145.	1.000	0.755
600. MJ/m^2	351.	0.849	0.690
900. MJ/m^2	490.	0.710	0.592
1200. MJ/m^2	668.	0.364	0.514
1500. MJ/m^2	785.	0.129	0.322

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	230.	0.850	0.770
300. MJ/m^2	384.	0.629	0.758
600. MJ/m^2	559.	0.239	0.815
900. MJ/m^2	677.	0.000	1.000
1200. MJ/m^2	789.	0.000	1.000
1500. MJ/m^2	898.	0.000	1.000

Thermal Diffusivity a = $520.*10^{-9}$ m^2/s

Thickness = 0.20 m, Opening Factor = 0.02 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.971
100. MJ/m^2	71.	1.000	0.930
150. MJ/m^2	181.	1.000	0.875
200. MJ/m^2	297.	0.903	0.862
250. MJ/m^2	309.	0.891	0.836

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	135.	0.918	0.947
100. MJ/m^2	228.	0.852	0.910
150. MJ/m^2	307.	0.801	0.839
200. MJ/m^2	396.	0.604	0.816
250. MJ/m^2	436.	0.514	0.797

Thickness = 0.20 m, Opening Factor = 0.04 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.949
100. MJ/m^2	29.	1.000	0.905
200. MJ/m^2	120.	1.000	0.836
300. MJ/m^2	198.	1.000	0.779
400. MJ/m^2	320.	0.880	0.768
500. MJ/m^2	410.	0.790	0.742

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	108.	0.937	0.896
100. MJ/m^2	208.	0.866	0.858
200. MJ/m^2	344.	0.719	0.814
300. MJ/m^2	395.	0.605	0.763
400. MJ/m^2	497.	0.379	0.726
500. MJ/m^2	561.	0.236	0.683

Thickness = 0.20 m, Opening Factor = 0.06 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	31.	1.000	0.874
300. MJ/m^2	123.	1.000	0.797
450. MJ/m^2	260.	0.940	0.714
600. MJ/m^2	344.	0.856	0.680
750. MJ/m^2	487.	0.713	0.618

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	237.	0.845	0.818
300. MJ/m^2	393.	0.611	0.790
450. MJ/m^2	471.	0.437	0.708
600. MJ/m^2	567.	0.222	0.667
750. MJ/m^2	657.	0.000	1.000

Thermal Diffusivity a = 520.*10^{-9} m^2/s

Thickness = 0.20 m, Opening Factor = 0.08 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.909
200. MJ/m^2	34.	1.000	0.844
400. MJ/m^2	131.	1.000	0.770
600. MJ/m^2	278.	0.922	0.684
800. MJ/m^2	399.	0.801	0.643
1000. MJ/m^2	487.	0.713	0.583

COLD Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	101.	0.942	0.826
200. MJ/m^2	257.	0.831	0.785
400. MJ/m^2	419.	0.551	0.776
600. MJ/m^2	534.	0.295	0.783
800. MJ/m^2	608.	0.131	0.632
1000. MJ/m^2	681.	0.000	1.000

Thickness = 0.20 m, Opening Factor = 0.12 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.869
300. MJ/m^2	20.	1.000	0.815
600. MJ/m^2	122.	1.000	0.727
900. MJ/m^2	230.	0.970	0.655
1200. MJ/m^2	396.	0.804	0.632
1500. MJ/m^2	517.	0.667	0.538

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	111.	0.935	0.791
300. MJ/m^2	234.	0.847	0.739
600. MJ/m^2	422.	0.545	0.749
900. MJ/m^2	560.	0.237	0.829
1200. MJ/m^2	616.	0.113	0.631
1500. MJ/m^2	725.	0.000	1.000

Thermal Diffusivity a = $520.*10^{-9}$ m^2/s

Thickness = 0.25 m, Opening Factor = 0.02 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.976
100. MJ/m^2	20.	1.000	0.943
150. MJ/m^2	79.	1.000	0.904
200. MJ/m^2	167.	1.000	0.854
250. MJ/m^2	172.	1.000	0.831

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	83.	0.955	0.937
100. MJ/m^2	177.	0.888	0.911
150. MJ/m^2	232.	0.848	0.858
200. MJ/m^2	306.	0.804	0.798
250. MJ/m^2	339.	0.730	0.781

Thickness = 0.25 m, Opening Factor = 0.04 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.959
100. MJ/m^2	20.	1.000	0.922
200. MJ/m^2	28.	1.000	0.867
300. MJ/m^2	78.	1.000	0.830
400. MJ/m^2	165.	1.000	0.777
500. MJ/m^2	241.	0.959	0.745

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	52.	0.977	0.890
100. MJ/m^2	138.	0.916	0.860
200. MJ/m^2	265.	0.825	0.816
300. MJ/m^2	335.	0.739	0.794
400. MJ/m^2	396.	0.603	0.739
500. MJ/m^2	445.	0.494	0.718

Thickness = 0.25 m, Opening Factor = 0.06 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.898
300. MJ/m^2	26.	1.000	0.838
450. MJ/m^2	107.	1.000	0.757
600. MJ/m^2	167.	1.000	0.704
750. MJ/m^2	290.	0.910	0.674

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	145.	0.910	0.825
300. MJ/m^2	302.	0.813	0.765
450. MJ/m^2	399.	0.597	0.756
600. MJ/m^2	483.	0.409	0.762
750. MJ/m^2	527.	0.312	0.662

Thermal Diffusivity a = $520.*10^{-9}$ m^2/s

Thickness = 0.25 m, Opening Factor = 0.08 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.923
200. MJ/m^2	20.	1.000	0.873
400. MJ/m^2	28.	1.000	0.815
600. MJ/m^2	116.	1.000	0.729
800. MJ/m^2	205.	0.995	0.663
1000. MJ/m^2	282.	0.918	0.643

COLD Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	34.	0.990	0.832
200. MJ/m^2	158.	0.902	0.797
400. MJ/m^2	322.	0.768	0.764
600. MJ/m^2	433.	0.522	0.747
800. MJ/m^2	523.	0.321	0.774
1000. MJ/m^2	550.	0.261	0.661

Thickness = 0.25 m, Opening Factor = 0.12 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.893
300. MJ/m^2	20.	1.000	0.850
600. MJ/m^2	20.	1.000	0.781
900. MJ/m^2	80.	1.000	0.721
1200. MJ/m^2	199.	1.000	0.652
1500. MJ/m^2	300.	0.900	0.619

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	38.	0.987	0.803
300. MJ/m^2	133.	0.919	0.761
600. MJ/m^2	306.	0.804	0.709
900. MJ/m^2	447.	0.489	0.733
1200. MJ/m^2	536.	0.291	0.799
1500. MJ/m^2	616.	0.114	0.860

Thermal Diffusivity $a = 520.*10^{-9}\ m^2/s$

Thickness = 0.30 m, Opening Factor = 0.02 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.980
100. MJ/m^2	20.	1.000	0.952
150. MJ/m^2	28.	1.000	0.919
200. MJ/m^2	81.	1.000	0.882
250. MJ/m^2	86.	1.000	0.864

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	45.	0.982	0.927
100. MJ/m^2	131.	0.920	0.911
150. MJ/m^2	190.	0.879	0.871
200. MJ/m^2	237.	0.845	0.822
250. MJ/m^2	265.	0.825	0.793

Thickness = 0.30 m, Opening Factor = 0.04 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.964
100. MJ/m^2	20.	1.000	0.933
200. MJ/m^2	20.	1.000	0.888
300. MJ/m^2	20.	1.000	0.858
400. MJ/m^2	76.	1.000	0.816
500. MJ/m^2	125.	1.000	0.780

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.892
100. MJ/m^2	79.	0.958	0.858
200. MJ/m^2	194.	0.876	0.824
300. MJ/m^2	269.	0.822	0.795
400. MJ/m^2	345.	0.717	0.781
500. MJ/m^2	360.	0.683	0.720

Thickness = 0.30 m, Opening Factor = 0.06 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.914
300. MJ/m^2	20.	1.000	0.863
450. MJ/m^2	28.	1.000	0.796
600. MJ/m^2	67.	1.000	0.757
750. MJ/m^2	151.	1.000	0.704

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	79.	0.958	0.824
300. MJ/m^2	220.	0.857	0.792
450. MJ/m^2	320.	0.773	0.741
600. MJ/m^2	404.	0.586	0.752
750. MJ/m^2	467.	0.444	0.751

Thermal Diffusivity a = $520.*10^{-9}$ m^2/s

Thickness = 0.30 m, Opening Factor = 0.08 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.934
200. MJ/m^2	20.	1.000	0.893
400. MJ/m^2	20.	1.000	0.845
600. MJ/m^2	30.	1.000	0.775
800. MJ/m^2	88.	1.000	0.724
1000. MJ/m^2	142.	1.000	0.684

COLD Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.852
200. MJ/m^2	85.	0.953	0.802
400. MJ/m^2	235.	0.847	0.770
600. MJ/m^2	346.	0.714	0.733
800. MJ/m^2	436.	0.514	0.737
1000. MJ/m^2	490.	0.393	0.747

Thickness = 0.30 m, Opening Factor = 0.12 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.911
300. MJ/m^2	20.	1.000	0.875
600. MJ/m^2	20.	1.000	0.819
900. MJ/m^2	20.	1.000	0.769
1200. MJ/m^2	80.	1.000	0.717
1500. MJ/m^2	152.	1.000	0.657

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.830
300. MJ/m^2	63.	0.969	0.778
600. MJ/m^2	214.	0.862	0.736
900. MJ/m^2	348.	0.711	0.723
1200. MJ/m^2	442.	0.501	0.731
1500. MJ/m^2	527.	0.311	0.761

Thermal Diffusivity $a = 520.*10^{-9}$ m^2/s

Thickness = 0.30 m, Opening Factor = 0.02 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.980
100. MJ/m^2	20.	1.000	0.952
150. MJ/m^2	28.	1.000	0.919
200. MJ/m^2	81.	1.000	0.882
250. MJ/m^2	86.	1.000	0.864

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	45.	0.982	0.927
100. MJ/m^2	131.	0.920	0.911
150. MJ/m^2	190.	0.879	0.871
200. MJ/m^2	237.	0.845	0.822
250. MJ/m^2	265.	0.825	0.793

Thickness = 0.30 m, Opening Factor = 0.04 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.964
100. MJ/m^2	20.	1.000	0.933
200. MJ/m^2	20.	1.000	0.888
300. MJ/m^2	20.	1.000	0.858
400. MJ/m^2	76.	1.000	0.816
500. MJ/m^2	125.	1.000	0.780

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.892
100. MJ/m^2	79.	0.958	0.858
200. MJ/m^2	194.	0.876	0.824
300. MJ/m^2	269.	0.822	0.795
400. MJ/m^2	345.	0.717	0.781
500. MJ/m^2	360.	0.683	0.720

Thickness = 0.30 m, Opening Factor = 0.06 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.914
300. MJ/m^2	20.	1.000	0.863
450. MJ/m^2	28.	1.000	0.796
600. MJ/m^2	67.	1.000	0.757
750. MJ/m^2	151.	1.000	0.704

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	79.	0.958	0.824
300. MJ/m^2	220.	0.857	0.792
450. MJ/m^2	320.	0.773	0.741
600. MJ/m^2	404.	0.586	0.752
750. MJ/m^2	467.	0.444	0.751

Thermal Diffusivity $a = 520.*10^{-9}\ m^2/s$

Thickness = 0.30 m, Opening Factor = 0.08 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.934
200. MJ/m^2	20.	1.000	0.893
400. MJ/m^2	20.	1.000	0.845
600. MJ/m^2	30.	1.000	0.775
800. MJ/m^2	88.	1.000	0.724
1000. MJ/m^2	142.	1.000	0.684

COLD Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.852
200. MJ/m^2	85.	0.953	0.802
400. MJ/m^2	235.	0.847	0.770
600. MJ/m^2	346.	0.714	0.733
800. MJ/m^2	436.	0.514	0.737
1000. MJ/m^2	490.	0.393	0.747

Thickness = 0.30 m, Opening Factor = 0.12 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.911
300. MJ/m^2	20.	1.000	0.875
600. MJ/m^2	20.	1.000	0.819
900. MJ/m^2	20.	1.000	0.769
1200. MJ/m^2	80.	1.000	0.717
1500. MJ/m^2	152.	1.000	0.657

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.830
300. MJ/m^2	63.	0.969	0.778
600. MJ/m^2	214.	0.862	0.736
900. MJ/m^2	348.	0.711	0.723
1200. MJ/m^2	442.	0.501	0.731
1500. MJ/m^2	527.	0.311	0.761

Thermal Diffusivity a = $520.*10^{-9}$ m^2/s

Thickness = 0.35 m, Opening Factor = 0.02 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.982
100. MJ/m^2	20.	1.000	0.958
150. MJ/m^2	20.	1.000	0.930
200. MJ/m^2	36.	1.000	0.899
250. MJ/m^2	40.	1.000	0.882

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.924
100. MJ/m^2	93.	0.948	0.905
150. MJ/m^2	159.	0.901	0.879
200. MJ/m^2	189.	0.879	0.832
250. MJ/m^2	210.	0.864	0.810

Thickness = 0.35 m, Opening Factor = 0.04 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.969
100. MJ/m^2	20.	1.000	0.941
200. MJ/m^2	20.	1.000	0.904
300. MJ/m^2	20.	1.000	0.876
400. MJ/m^2	22.	1.000	0.843
500. MJ/m^2	57.	1.000	0.811

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.907
100. MJ/m^2	44.	0.983	0.861
200. MJ/m^2	137.	0.916	0.829
300. MJ/m^2	212.	0.863	0.809
400. MJ/m^2	288.	0.808	0.771
500. MJ/m^2	325.	0.762	0.755

Thickness = 0.35 m, Opening Factor = 0.06 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.925
300. MJ/m^2	20.	1.000	0.881
450. MJ/m^2	20.	1.000	0.825
600. MJ/m^2	20.	1.000	0.791
750. MJ/m^2	68.	1.000	0.749

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	37.	0.988	0.830
300. MJ/m^2	156.	0.903	0.802
450. MJ/m^2	252.	0.834	0.748
600. MJ/m^2	331.	0.749	0.734
750. MJ/m^2	402.	0.591	0.745

Thermal Diffusivity a = $520.*10^{-9}$ m^2/s

Thickness = 0.35 m, Opening Factor = 0.08 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.940
200. MJ/m^2	20.	1.000	0.908
400. MJ/m^2	20.	1.000	0.866
600. MJ/m^2	20.	1.000	0.806
800. MJ/m^2	21.	1.000	0.766
1000. MJ/m^2	57.	1.000	0.732

COLD Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.870
200. MJ/m^2	40.	0.986	0.810
400. MJ/m^2	167.	0.895	0.782
600. MJ/m^2	273.	0.819	0.729
800. MJ/m^2	360.	0.684	0.733
1000. MJ/m^2	417.	0.555	0.729

Thickness = 0.35 m, Opening Factor = 0.12 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.919
300. MJ/m^2	20.	1.000	0.891
600. MJ/m^2	20.	1.000	0.845
900. MJ/m^2	20.	1.000	0.802
1200. MJ/m^2	20.	1.000	0.759
1500. MJ/m^2	61.	1.000	0.705

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.853
300. MJ/m^2	21.	0.999	0.789
600. MJ/m^2	142.	0.913	0.745
900. MJ/m^2	265.	0.825	0.716
1200. MJ/m^2	351.	0.704	0.710
1500. MJ/m^2	448.	0.487	0.729

Thermal Diffusivity $a = 520.*10^{-9}\ m^2/s$

Thickness = 0.40 m, Opening Factor = 0.02 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.983
100. MJ/m^2	20.	1.000	0.963
150. MJ/m^2	20.	1.000	0.938
200. MJ/m^2	20.	1.000	0.911
250. MJ/m^2	20.	1.000	0.896

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.932
100. MJ/m^2	68.	0.966	0.906
150. MJ/m^2	130.	0.921	0.884
200. MJ/m^2	169.	0.894	0.849
250. MJ/m^2	169.	0.894	0.817

Thickness = 0.40 m, Opening Factor = 0.04 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.971
100. MJ/m^2	20.	1.000	0.947
200. MJ/m^2	20.	1.000	0.915
300. MJ/m^2	20.	1.000	0.890
400. MJ/m^2	20.	1.000	0.861
500. MJ/m^2	20.	1.000	0.835

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.917
100. MJ/m^2	20.	1.000	0.865
200. MJ/m^2	92.	0.948	0.830
300. MJ/m^2	163.	0.898	0.818
400. MJ/m^2	244.	0.840	0.797
500. MJ/m^2	278.	0.815	0.764

Thickness = 0.40 m, Opening Factor = 0.06 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.931
300. MJ/m^2	20.	1.000	0.895
450. MJ/m^2	20.	1.000	0.847
600. MJ/m^2	20.	1.000	0.817
750. MJ/m^2	20.	1.000	0.780

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.843
300. MJ/m^2	106.	0.939	0.806
450. MJ/m^2	194.	0.876	0.765
600. MJ/m^2	269.	0.822	0.735
750. MJ/m^2	337.	0.735	0.727

Thermal Diffusivity a = $520.*10^{-9}$ m^2/s

Thickness = 0.40 m, Opening Factor = 0.08 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.946
200. MJ/m^2	20.	1.000	0.918
400. MJ/m^2	20.	1.000	0.880
600. MJ/m^2	20.	1.000	0.831
800. MJ/m^2	20.	1.000	0.794
1000. MJ/m^2	20.	1.000	0.766

COLD Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.885
200. MJ/m^2	20.	1.000	0.827
400. MJ/m^2	113.	0.934	0.791
600. MJ/m^2	210.	0.865	0.744
800. MJ/m^2	290.	0.807	0.716
1000. MJ/m^2	350.	0.706	0.722

Thickness = 0.40 m, Opening Factor = 0.12 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.926
300. MJ/m^2	20.	1.000	0.904
600. MJ/m^2	20.	1.000	0.862
900. MJ/m^2	20.	1.000	0.829
1200. MJ/m^2	20.	1.000	0.789
1500. MJ/m^2	20.	1.000	0.745

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.870
300. MJ/m^2	20.	1.000	0.818
600. MJ/m^2	86.	0.953	0.759
900. MJ/m^2	193.	0.877	0.727
1200. MJ/m^2	285.	0.811	0.710
1500. MJ/m^2	375.	0.650	0.703

Thermal Diffusivity $a = 520.*10^{-9}\ m^2/s$

Thickness = 0.45 m, Opening Factor = 0.02 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.985
100. MJ/m^2	20.	1.000	0.967
150. MJ/m^2	20.	1.000	0.945
200. MJ/m^2	20.	1.000	0.920
250. MJ/m^2	20.	1.000	0.908

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20	1.000	0.939
100. MJ/m^2	43.	0.984	0.903
150. MJ/m^2	101.	0.942	0.887
200. MJ/m^2	143.	0.912	0.856
250. MJ/m^2	154.	0.904	0.837

Thickness = 0.45 m, Opening Factor = 0.04 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.973
100. MJ/m^2	20.	1.000	0.952
200. MJ/m^2	20.	1.000	0.924
300. MJ/m^2	20.	1.000	0.902
400. MJ/m^2	20.	1.000	0.876
500. MJ/m^2	20.	1.000	0.852

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.924
100. MJ/m^2	20.	1.000	0.877
200. MJ/m^2	53.	0.976	0.832
300. MJ/m^2	118.	0.930	0.820
400. MJ/m^2	200.	0.872	0.801
500. MJ/m^2	236.	0.846	0.782

Thickness = 0.45 m, Opening Factor = 0.06 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.937
300. MJ/m^2	20.	1.000	0.907
450. MJ/m^2	20.	1.000	0.862
600. MJ/m^2	20.	1.000	0.839
750. MJ/m^2	20.	1.000	0.805

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.858
300. MJ/m^2	65.	0.968	0.810
450. MJ/m^2	140.	0.914	0.772
600. MJ/m^2	213.	0.862	0.747
750. MJ/m^2	283.	0.812	0.726

Thermal Diffusivity a = $520.*10^{-9}$ m^2/s

Thickness = 0.45 m, Opening Factor = 0.08 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.950
200. MJ/m^2	20.	1.000	0.924
400. MJ/m^2	20.	1.000	0.893
600. MJ/m^2	20.	1.000	0.850
800. MJ/m^2	20.	1.000	0.817
1000. MJ/m^2	20.	1.000	0.792
COLD Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.897
200. MJ/m^2	20.	1.000	0.845
400. MJ/m^2	69.	0.965	0.795
600. MJ/m^2	151.	0.906	0.748
800. MJ/m^2	229.	0.851	0.729
1000. MJ/m^2	287.	0.810	0.710

Thickness = 0.45 m, Opening Factor = 0.12 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.932
300. MJ/m^2	20.	1.000	0.914
600. MJ/m^2	20.	1.000	0.878
900. MJ/m^2	20.	1.000	0.847
1200. MJ/m^2	20.	1.000	0.813
1500. MJ/m^2	20.	1.000	0.774
COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.884
300. MJ/m^2	20.	1.000	0.839
600. MJ/m^2	45.	0.982	0.770
900. MJ/m^2	137.	0.916	0.737
1200. MJ/m^2	220.	0.857	0.723
1500. MJ/m^2	307.	0.801	0.681

Thermal Diffusivity $a = 520.*10^{-9}$ m^2/s

Thickness = 0.50 m, Opening Factor = 0.02 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.986
100. MJ/m^2	20.	1.000	0.970
150. MJ/m^2	20.	1.000	0.949
200. MJ/m^2	20.	1.000	0.927
250. MJ/m^2	20.	1.000	0.916

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.943
100. MJ/m^2	24.	0.997	0.904
150. MJ/m^2	77.	0.960	0.885
200. MJ/m^2	119.	0.929	0.861
250. MJ/m^2	131.	0.921	0.843

Thickness = 0.50 m, Opening Factor = 0.04 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.975
100. MJ/m^2	20.	1.000	0.956
200. MJ/m^2	20.	1.000	0.929
300. MJ/m^2	20.	1.000	0.913
400. MJ/m^2	20.	1.000	0.886
500. MJ/m^2	20.	1.000	0.866

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.929
100. MJ/m^2	20.	1.000	0.889
200. MJ/m^2	32.	0.992	0.840
300. MJ/m^2	85.	0.953	0.824
400. MJ/m^2	161.	0.899	0.810
500. MJ/m^2	197.	0.874	0.793

Thickness = 0.50 m, Opening Factor = 0.06 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.942
300. MJ/m^2	20.	1.000	0.915
450. MJ/m^2	20.	1.000	0.874
600. MJ/m^2	20.	1.000	0.853
750. MJ/m^2	20.	1.000	0.825

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.871
300. MJ/m^2	36.	0.989	0.817
450. MJ/m^2	102.	0.941	0.784
600. MJ/m^2	166.	0.895	0.754
750. MJ/m^2	232.	0.849	0.738

Thermal Diffusivity $a = 520.*10^{-9}\ m^2/s$

Thickness = 0.50 m, Opening Factor = 0.08 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.952
200. MJ/m^2	20.	1.000	0.930
400. MJ/m^2	20.	1.000	0.903
600. MJ/m^2	20.	1.000	0.863
800. MJ/m^2	20.	1.000	0.838
1000. MJ/m^2	20.	1.000	0.813

COLD Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.907
200. MJ/m^2	20.	1.000	0.858
400. MJ/m^2	38.	0.987	0.802
600. MJ/m^2	110.	0.936	0.762
800. MJ/m^2	179.	0.886	0.741
1000. MJ/m^2	235.	0.846	0.725

Thickness = 0.50 m, Opening Factor = 0.12 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.935
300. MJ/m^2	20.	1.000	0.921
600. MJ/m^2	20.	1.000	0.889
900. MJ/m^2	20.	1.000	0.861
1200. MJ/m^2	20.	1.000	0.834
1500. MJ/m^2	20.	1.000	0.796

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.896
300. MJ/m^2	20.	1.000	0.853
600. MJ/m^2	20.	1.000	0.781
900. MJ/m^2	92.	0.948	0.741
1200. MJ/m^2	169.	0.894	0.733
1500. MJ/m^2	252.	0.834	0.706

Thermal Diffusivity a = $520.*10^{-9}$ m^2/s

Thickness = 0.55 m, Opening Factor = 0.02 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.987
100. MJ/m^2	20.	1.000	0.972
150. MJ/m^2	20.	1.000	0.952
200. MJ/m^2	20.	1.000	0.933
250. MJ/m^2	20.	1.000	0.924

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.947
100. MJ/m^2	20.	1.000	0.910
150. MJ/m^2	57.	0.973	0.886
200. MJ/m^2	92.	0.948	0.862
250. MJ/m^2	109.	0.936	0.848

Thickness = 0.55 m, Opening Factor = 0.04 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.977
100. MJ/m^2	20.	1.000	0.958
200. MJ/m^2	20.	1.000	0.934
300. MJ/m^2	20.	1.000	0.919
400. MJ/m^2	20.	1.000	0.896
500. MJ/m^2	20.	1.000	0.879

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.933
100. MJ/m^2	20.	1.000	0.900
200. MJ/m^2	20.	1.000	0.845
300. MJ/m^2	56.	0.974	0.827
400. MJ/m^2	124.	0.926	0.814
500. MJ/m^2	161.	0.899	0.804

Thickness = 0.55 m, Opening Factor = 0.06 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.947
300. MJ/m^2	20.	1.000	0.921
450. MJ/m^2	20.	1.000	0.886
600. MJ/m^2	20.	1.000	0.865
750. MJ/m^2	20.	1.000	0.842

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.882
300. MJ/m^2	20.	1.000	0.826
450. MJ/m^2	66.	0.967	0.789
600. MJ/m^2	126.	0.924	0.765
750. MJ/m^2	179.	0.886	0.744

Thermal Diffusivity a = $520.*10^{-9}$ m^2/s

Thickness = 0.55 m, Opening Factor = 0.08 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.954
200. MJ/m^2	20.	1.000	0.935
400. MJ/m^2	20.	1.000	0.911
600. MJ/m^2	20.	1.000	0.876
800. MJ/m^2	20.	1.000	0.850
1000. MJ/m^2	20.	1.000	0.833

COLD Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.914
200. MJ/m^2	20.	1.000	0.870
400. MJ/m^2	20.	1.000	0.812
600. MJ/m^2	72.	0.963	0.771
800. MJ/m^2	136.	0.917	0.744
1000. MJ/m^2	187.	0.881	0.736

Thickness = 0.55 m, Opening Factor = 0.12 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.938
300. MJ/m^2	20.	1.000	0.926
600. MJ/m^2	20.	1.000	0.898
900. MJ/m^2	20.	1.000	0.876
1200. MJ/m^2	20.	1.000	0.848
1500. MJ/m^2	20.	1.000	0.817

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.906
300. MJ/m^2	20.	1.000	0.866
600. MJ/m^2	20.	1.000	0.803
900. MJ/m^2	58.	0.973	0.757
1200. MJ/m^2	123.	0.926	0.735
1500. MJ/m^2	200.	0.871	0.717

Thermal Diffusivity $a = 520.*10^{-9}$ m^2/s

Thickness = 0.60 m, Opening Factor = 0.02 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.989
100. MJ/m^2	20.	1.000	0.973
150. MJ/m^2	20.	1.000	0.956
200. MJ/m^2	20.	1.000	0.938
250. MJ/m^2	20.	1.000	0.929

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.951
100. MJ/m^2	20.	1.000	0.918
150. MJ/m^2	40.	0.986	0.886
200. MJ/m^2	77.	0.960	0.869
250. MJ/m^2	88.	0.951	0.852

Thickness = 0.60 m, Opening Factor = 0.04 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.978
100. MJ/m^2	20.	1.000	0.959
200. MJ/m^2	20.	1.000	0.938
300. MJ/m^2	20.	1.000	0.924
400. MJ/m^2	20.	1.000	0.905
500. MJ/m^2	20.	1.000	0.886

COLD Fire Load	T_M	ξ_{cM}	η
75. MJ/m^2	20.	1.000	0.937
100. MJ/m^2	20.	1.000	0.907
200. MJ/m^2	20.	1.000	0.857
300. MJ/m^2	35.	0.989	0.832
400. MJ/m^2	97.	0.945	0.817
500. MJ/m^2	130.	0.921	0.808

Thickness = 0.60 m, Opening Factor = 0.06 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.948
300. MJ/m^2	20.	1.000	0.926
450. MJ/m^2	20.	1.000	0.894
600. MJ/m^2	20.	1.000	0.876
750. MJ/m^2	20.	1.000	0.853

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.891
300. MJ/m^2	20.	1.000	0.840
450. MJ/m^2	42.	0.984	0.794
600. MJ/m^2	90.	0.950	0.772
750. MJ/m^2	148.	0.909	0.749

Thermal Diffusivity a = $520.*10^{-9}$ m^2/s

Thickness = 0.60 m, Opening Factor = 0.08 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.956
200. MJ/m^2	20.	1.000	0.938
400. MJ/m^2	20.	1.000	0.917
600. MJ/m^2	20.	1.000	0.885
800. MJ/m^2	20.	1.000	0.862
1000. MJ/m^2	20.	1.000	0.845

COLD Fire Load	T_M	ξ_{cM}	η
100. MJ/m^2	20.	1.000	0.918
200. MJ/m^2	20.	1.000	0.881
400. MJ/m^2	20.	1.000	0.829
600. MJ/m^2	45.	0.982	0.777
800. MJ/m^2	97.	0.945	0.746
1000. MJ/m^2	147.	0.909	0.739

Thickness = 0.60 m, Opening Factor = 0.12 $m^{\frac{1}{2}}$

HOT Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.940
300. MJ/m^2	20.	1.000	0.929
600. MJ/m^2	20.	1.000	0.907
900. MJ/m^2	20.	1.000	0.883
1200. MJ/m^2	20.	1.000	0.860
1500. MJ/m^2	20.	1.000	0.833

COLD Fire Load	T_M	ξ_{cM}	η
150. MJ/m^2	20.	1.000	0.915
300. MJ/m^2	20.	1.000	0.878
600. MJ/m^2	20.	1.000	0.822
900. MJ/m^2	32.	0.991	0.766
1200. MJ/m^2	87.	0.952	0.741
1500. MJ/m^2	158.	0.902	0.726

Thermal Diffusivity $a = 350.*10^{-9}\ m^2/s$

Thickness = 0.10 m, Standard Fire

HOT Rating	T_M	ξ_{cM}	η
0.5 h	390.	0.810	0.873
1.0 h	604.	0.491	0.850
1.5 h	704.	0.292	0.726
2.0 h	805.	0.090	0.558
3.0 h	886.	0.000	1.000
4.0 h	939.	0.000	1.000

COLD Rating	T_M	ξ_{cM}	η
0.5 h	479.	0.419	0.855
1.0 h	632.	0.078	0.595
1.5 h	732.	0.000	1.000
2.0 h	822.	0.000	1.000
3.0 h	903.	0.000	1.000
4.0 h	955.	0.000	1.000

Thickness = 0.15 m, Standard Fire

HOT Rating	T_M	ξ_{cM}	η
0.5 h	139.	1.000	0.853
1.0 h	344.	0.856	0.822
1.5 h	444.	0.756	0.730
2.0 h	583.	0.535	0.667
3.0 h	705.	0.290	0.554
4.0 h	797.	0.107	0.363

COLD Rating	T_M	ξ_{cM}	η
0.5 h	350.	0.707	0.843
1.0 h	456.	0.469	0.783
1.5 h	579.	0.196	0.675
2.0 h	673.	0.000	1.000
3.0 h	768.	0.000	1.000
4.0 h	872.	0.000	1.000

Thickness = 0.20 m, Standard Fire

HOT Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.889
1.0 h	153.	1.000	0.817
1.5 h	224.	0.976	0.740
2.0 h	350.	0.850	0.715
3.0 h	488.	0.712	0.624
4.0 h	597.	0.507	0.556

COLD Rating	T_M	ξ_{cM}	η
0.5 h	244.	0.840	0.838
1.0 h	365.	0.672	0.814
1.5 h	428.	0.531	0.715
2.0 h	515.	0.339	0.668
3.0 h	645.	0.048	0.334
4.0 h	747.	0.000	1.000

Thermal Diffusivity a = $350.*10^{-9}$ m^2/s

Thickness = 0.25 m, Standard Fire

HOT Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.911
1.0 h	47.	1.000	0.854
1.5 h	94.	1.000	0.790
2.0 h	180.	1.000	0.727
3.0 h	296.	0.904	0.680
4.0 h	401.	0.799	0.626

COLD Rating	T_M	ξ_{cM}	η
0.5 h	156.	0.903	0.839
1.0 h	287.	0.809	0.803
1.5 h	348.	0.710	0.754
2.0 h	396.	0.602	0.692
3.0 h	516.	0.336	0.648
4.0 h	616.	0.113	0.589

Thickness = 0.30 m, Standard Fire

HOT Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.924
1.0 h	20.	1.000	0.877
1.5 h	25.	1.000	0.824
2.0 h	81.	1.000	0.776
3.0 h	157.	1.000	0.709
4.0 h	244.	0.956	0.657

COLD Rating	T_M	ξ_{cM}	η
0.5 h	92.	0.948	0.840
1.0 h	217.	0.860	0.815
1.5 h	286.	0.810	0.749
2.0 h	312.	0.791	0.695
3.0 h	408.	0.576	0.646
4.0 h	504.	0.363	0.630

Thickness = 0.35 m, Standard Fire

HOT Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.933
1.0 h	20.	1.000	0.894
1.5 h	20.	1.000	0.849
2.0 h	25.	1.000	0.807
3.0 h	84.	1.000	0.755
4.0 h	140.	1.000	0.699

COLD Rating	T_M	ξ_{cM}	η
0.5 h	48.	0.980	0.842
1.0 h	159.	0.901	0.825
1.5 h	229.	0.851	0.779
2.0 h	278.	0.816	0.734
3.0 h	335.	0.739	0.671
4.0 h	415.	0.561	0.643

Thermal Diffusivity a = $350.*10^{-9}$ m^2/s

Thickness = 0.40 m, Standard Fire

HOT	Rating	T_M	ξ_{cM}	η
	0.5 h	20.	1.000	0.939
	1.0 h	20.	1.000	0.906
	1.5 h	20.	1.000	0.866
	2.0 h	20.	1.000	0.831
	3.0 h	33.	1.000	0.784
	4.0 h	78.	1.000	0.740
COLD	Rating	T_M	ξ_{cM}	η
	0.5 h	20.	1.000	0.845
	1.0 h	111.	0.935	0.826
	1.5 h	173.	0.891	0.787
	2.0 h	233.	0.848	0.755
	3.0 h	295.	0.804	0.701
	4.0 h	343.	0.721	0.650

Thickness = 0.45 m, Standard Fire

HOT	Rating	T_M	ξ_{cM}	η
	0.5 h	20.	1.000	0.945
	1.0 h	20.	1.000	0.917
	1.5 h	20.	1.000	0.879
	2.0 h	20.	1.000	0.849
	3.0 h	20.	1.000	0.808
	4.0 h	34.	1.000	0.769
COLD	Rating	T_M	ξ_{cM}	η
	0.5 h	20.	1.000	0.861
	1.0 h	72.	0.963	0.828
	1.5 h	138.	0.916	0.801
	2.0 h	189.	0.879	0.772
	3.0 h	257.	0.831	0.725
	4.0 h	286.	0.810	0.669

Thickness = 0.50 m, Standard Fire

HOT	Rating	T_M	ξ_{cM}	η
	0.5 h	20.	1.000	0.949
	1.0 h	20.	1.000	0.923
	1.5 h	20.	1.000	0.891
	2.0 h	20.	1.000	0.862
	3.0 h	20.	1.000	0.827
	4.0 h	20.	1.000	0.793
COLD	Rating	T_M	ξ_{cM}	η
	0.5 h	20.	1.000	0.874
	1.0 h	45.	0.982	0.833
	1.5 h	104.	0.940	0.811
	2.0 h	151.	0.906	0.785
	3.0 h	218.	0.859	0.743
	4.0 h	268.	0.823	0.705

Thermal Diffusivity a = $350.*10^{-9}$ m^2/s

Thickness = 0.55 m, Standard Fire

HOT Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.951
1.0 h	20.	1.000	0.928
1.5 h	20.	1.000	0.900
2.0 h	20.	1.000	0.874
3.0 h	20.	1.000	0.845
4.0 h	20.	1.000	0.811

COLD Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.883
1.0 h	23.	0.998	0.840
1.5 h	68.	0.966	0.809
2.0 h	117.	0.931	0.793
3.0 h	187.	0.881	0.754
4.0 h	235.	0.847	0.721

Thickness = 0.60 m, Standard Fire

HOT Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.953
1.0 h	20.	1.000	0.933
1.5 h	20.	1.000	0.907
2.0 h	20.	1.000	0.884
3.0 h	20.	1.000	0.855
4.0 h	20.	1.000	0.828

COLD Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.893
1.0 h	20.	1.000	0.848
1.5 h	48.	0.980	0.818
2.0 h	90.	0.950	0.800
3.0 h	158.	0.901	0.763
4.0 h	206.	0.867	0.737

Thermal Diffusivity a = $520.*10^{-9}$ m^2/s

Thickness = 0.10 m, Standard Fire

HOT Rating	T_M	ξ_{cM}	η
0.5 h	503.	0.694	0.857
1.0 h	668.	0.364	0.871
1.5 h	749.	0.202	0.674
2.0 h	843.	0.014	0.237
3.0 h	907.	0.000	1.000
4.0 h	952.	0.000	1.000

COLD Rating	T_M	ξ_{cM}	η
0.5 h	554.	0.251	0.828
1.0 h	689.	0.000	1.000
1.5 h	797.	0.000	1.000
2.0 h	861.	0.000	1.000
3.0 h	919.	0.000	1.000
4.0 h	962.	0.000	1.000

Thickness = 0.15 m, Standard Fire

HOT Rating	T_M	ξ_{cM}	η
0.5 h	246.	0.954	0.838
1.0 h	455.	0.745	0.812
1.5 h	539.	0.622	0.685
2.0 h	675.	0.350	0.634
3.0 h	796.	0.109	0.409
4.0 h	874.	0.000	1.000

COLD Rating	T_M	ξ_{cM}	η
0.5 h	428.	0.533	0.891
1.0 h	548.	0.265	0.775
1.5 h	674.	0.000	1.000
2.0 h	756.	0.000	1.000
3.0 h	857.	0.000	1.000
4.0 h	932.	0.000	1.000

Thickness = 0.20 m, Standard Fire

HOT Rating	T_M	ξ_{cM}	η
0.5 h	84.	1.000	0.867
1.0 h	254.	0.946	0.801
1.5 h	321.	0.879	0.733
2.0 h	470.	0.730	0.669
3.0 h	620.	0.459	0.583
4.0 h	716.	0.268	0.483

COLD Rating	T_M	ξ_{cM}	η
0.5 h	320.	0.772	0.842
1.0 h	417.	0.555	0.780
1.5 h	531.	0.302	0.703
2.0 h	626.	0.091	0.570
3.0 h	750.	0.000	1.000
4.0 h	832.	0.000	1.000

Thermal Diffusivity $a = 520.*10^{-9}\ m^2/s$

Thickness = 0.25 m, Standard Fire

HOT Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.892
1.0 h	115.	1.000	0.826
1.5 h	162.	1.000	0.754
2.0 h	287.	0.913	0.708
3.0 h	440.	0.760	0.642
4.0 h	547.	0.605	0.561

COLD Rating	T_M	ξ_{cM}	η
0.5 h	231.	0.849	0.835
1.0 h	347.	0.712	0.791
1.5 h	417.	0.557	0.715
2.0 h	499.	0.374	0.664
3.0 h	633.	0.075	0.558
4.0 h	733.	0.000	1.000

Thickness = 0.30 m, Standard Fire

HOT Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.911
1.0 h	40.	1.000	0.855
1.5 h	76.	1.000	0.796
2.0 h	155.	1.000	0.734
3.0 h	285.	0.915	0.676
4.0 h	387.	0.813	0.623

COLD Rating	T_M	ξ_{cM}	η
0.5 h	161.	0.899	0.841
1.0 h	293.	0.805	0.803
1.5 h	334.	0.741	0.716
2.0 h	404.	0.585	0.691
3.0 h	525.	0.316	0.644
4.0 h	626.	0.091	0.561

Thickness = 0.35 m, Standard Fire

HOT Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.921
1.0 h	20.	1.000	0.874
1.5 h	22.	1.000	0.825
2.0 h	82.	1.000	0.773
3.0 h	168.	1.000	0.700
4.0 h	254.	0.946	0.650

COLD Rating	T_M	ξ_{cM}	η
0.5 h	107.	0.938	0.838
1.0 h	233.	0.848	0.813
1.5 h	302.	0.813	0.732
2.0 h	330.	0.749	0.693
3.0 h	438.	0.510	0.656
4.0 h	530.	0.305	0.621

Thermal Diffusivity a = $520.*10^{-9}$ m^2/s

Thickness = 0.40 m, Standard Fire

HOT Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.931
1.0 h	20.	1.000	0.889
1.5 h	20.	1.000	0.846
2.0 h	32.	1.000	0.800
3.0 h	102.	1.000	0.743
4.0 h	160.	1.000	0.685

COLD Rating	T_M	ξ_{cM}	η
0.5 h	65.	0.968	0.841
1.0 h	179.	0.886	0.819
1.5 h	254.	0.833	0.768
2.0 h	299.	0.800	0.722
3.0 h	367.	0.668	0.668
4.0 h	451.	0.480	0.639

Thickness = 0.45 m, Standard Fire

HOT Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.936
1.0 h	20.	1.000	0.901
1.5 h	20.	1.000	0.862
2.0 h	20.	1.000	0.823
3.0 h	53.	1.000	0.772
4.0 h	103.	1.000	0.725

COLD Rating	T_M	ξ_{cM}	η
0.5 h	33.	0.990	0.843
1.0 h	139.	0.915	0.827
1.5 h	209.	0.865	0.783
2.0 h	260.	0.829	0.742
3.0 h	311.	0.793	0.676
4.0 h	386.	0.626	0.643

Thickness = 0.50 m, Standard Fire

HOT Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.940
1.0 h	20.	1.000	0.911
1.5 h	20.	1.000	0.873
2.0 h	20.	1.000	0.841
3.0 h	20.	1.000	0.793
4.0 h	58.	1.000	0.754

COLD Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.849
1.0 h	102.	0.941	0.827
1.5 h	169.	0.894	0.792
2.0 h	221.	0.856	0.756
3.0 h	284.	0.812	0.705
4.0 h	331.	0.747	0.655

Thermal Diffusivity $a = 520.*10^{-9}$ m^2/s

Thickness = 0.55 m, Standard Fire

HOT Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.945
1.0 h	20.	1.000	0.919
1.5 h	20.	1.000	0.884
2.0 h	20.	1.000	0.854
3.0 h	20.	1.000	0.812
4.0 h	26.	1.000	0.775

COLD Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.862
1.0 h	72.	0.963	0.829
1.5 h	138.	0.916	0.802
2.0 h	189.	0.880	0.772
3.0 h	257.	0.831	0.726
4.0 h	286.	0.810	0.670

Thickness = 0.60 m, Standard Fire

HOT Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.949
1.0 h	20.	1.000	0.923
1.5 h	20.	1.000	0.894
2.0 h	20.	1.000	0.864
3.0 h	20.	1.000	0.828
4.0 h	20.	1.000	0.794

COLD Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.872
1.0 h	49.	0.979	0.833
1.5 h	108.	0.937	0.808
2.0 h	156.	0.903	0.782
3.0 h	227.	0.852	0.741
4.0 h	273.	0.819	0.701

Thermal Diffusivity a = $350.*10^{-9}$ m^2/s

Thickness = 0.10 m, Standard fire without decay.

Rating	T_M	ξ_{cM}	η
0.5 h	179.	1.000	0.828
1.0 h	393.	0.807	0.788
1.5 h	538.	0.624	0.691
2.0 h	639.	0.421	0.644
3.0 h	761.	0.177	0.504
4.0 h	838.	0.024	0.214

Thickness = 0.15 m, Standard fire without decay.

Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.886
1.0 h	149.	1.000	0.811
1.5 h	261.	0.939	0.725
2.0 h	373.	0.827	0.681
3.0 h	533.	0.634	0.597
4.0 h	648.	0.404	0.543

Thickness = 0.20 m, Standard fire without decay.

Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.915
1.0 h	28.	1.000	0.859
1.5 h	108.	1.000	0.786
2.0 h	179.	1.000	0.723
3.0 h	310.	0.890	0.660
4.0 h	433.	0.767	0.602

Thickness = 0.25 m, Standard fire without decay.

Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.930
1.0 h	20.	1.000	0.886
1.5 h	23.	1.000	0.829
2.0 h	73.	1.000	0.783
3.0 h	169.	1.000	0.709
4.0 h	247.	0.953	0.644

Thermal Diffusivity a = $350.*10^{-9}$ m^2/s

Thickness = 0.30 m, Standard fire without decay.

Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.939
1.0 h	20.	1.000	0.903
1.5 h	20.	1.000	0.856
2.0 h	20.	1.000	0.819
3.0 h	81.	1.000	0.763
4.0 h	149.	1.000	0.704

Thickness = 0.35 m, Standard fire without decay.

Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.948
1.0 h	20.	1.000	0.918
1.5 h	20.	1.000	0.874
2.0 h	20.	1.000	0.845
3.0 h	25.	1.000	0.796
4.0 h	77.	1.000	0.751

Thickness = 0.40 m, Standard fire without decay.

Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.951
1.0 h	20.	1.000	0.926
1.5 h	20.	1.000	0.890
2.0 h	20.	1.000	0.862
3.0 h	20.	1.000	0.821
4.0 h	28.	1.000	0.780

Thickness = 0.45 m, Standard fire without decay.

Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.954
1.0 h	20.	1.000	0.933
1.5 h	20.	1.000	0.901
2.0 h	20.	1.000	0.876
3.0 h	20.	1.000	0.843
4.0 h	20.	1.000	0.805

Thermal Diffusivity a = $350.*10^{-9}$ m^2/s

Thickness = 0.50 m, Standard fire without decay.

Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.957
1.0 h	20.	1.000	0.939
1.5 h	20.	1.000	0.911
2.0 h	20.	1.000	0.889
3.0 h	20.	1.000	0.856
4.0 h	20.	1.000	0.826

Thickness = 0.55 m, Standard fire without decay.

Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.960
1.0 h	20.	1.000	0.942
1.5 h	20.	1.000	0.919
2.0 h	20.	1.000	0.897
3.0 h	20.	1.000	0.868
4.0 h	20.	1.000	0.842

Thickness = 0.60 m, Standard fire without decay.

Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.963
1.0 h	20.	1.000	0.944
1.5 h	20.	1.000	0.925
2.0 h	20.	1.000	0.906
3.0 h	20.	1.000	0.880
4.0 h	20.	1.000	0.854

Thermal Diffusivity $a = 520.*10^{-9}$ m^2/s

Thickness = 0.10 m, Standard fire without decay.

Rating	T_M	ξ_{cM}	η
0.5 h	293.	0.907	0.826
1.0 h	502.	0.696	0.772
1.5 h	640.	0.419	0.711
2.0 h	727.	0.246	0.620
3.0 h	819.	0.063	0.381
4.0 h	882.	0.000	1.000

Thickness = 0.15 m, Standard fire without decay.

Rating	T_M	ξ_{cM}	η
0.5 h	79.	1.000	0.863
1.0 h	256.	0.944	0.783
1.5 h	405.	0.795	0.713
2.0 h	515.	0.670	0.640
3.0 h	661.	0.378	0.581
4.0 h	764.	0.172	0.441

Thickness = 0.20 m, Standard fire without decay.

Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.896
1.0 h	106.	1.000	0.828
1.5 h	208.	0.992	0.732
2.0 h	304.	0.896	0.690
3.0 h	467.	0.733	0.618
4.0 h	586.	0.528	0.560

Thickness = 0.25 m, Standard fire without decay.

Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.917
1.0 h	21.	1.000	0.862
1.5 h	96.	1.000	0.791
2.0 h	166.	1.000	0.733
3.0 h	290.	0.910	0.663
4.0 h	412.	0.788	0.608

Thermal Diffusivity a = $520.*10^{-9}$ m^2/s

Thickness = 0.30 m, Standard fire without decay.

Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.929
1.0 h	20.	1.000	0.884
1.5 h	27.	1.000	0.826
2.0 h	79.	1.000	0.780
3.0 h	177.	1.000	0.703
4.0 h	260.	0.940	0.642

Thickness = 0.35 m, Standard fire without decay.

Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.937
1.0 h	20.	1.000	0.899
1.5 h	20.	1.000	0.850
2.0 h	24.	1.000	0.811
3.0 h	101.	1.000	0.752
4.0 h	172.	1.000	0.688

Thickness = 0.40 m, Standard fire without decay.

Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.944
1.0 h	20.	1.000	0.913
1.5 h	20.	1.000	0.867
2.0 h	20.	1.000	0.835
3.0 h	46.	1.000	0.782
4.0 h	106.	1.000	0.732

Thickness = 0.45 m, Standard fire without decay.

Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.949
1.0 h	20.	1.000	0.921
1.5 h	20.	1.000	0.880
2.0 h	20.	1.000	0.852
3.0 h	20.	1.000	0.806
4.0 h	56.	1.000	0.762

Thermal Diffusivity a = $520.*10^{-9}$ m^2/s

Thickness = 0.50 m, Standard fire without decay.

Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.952
1.0 h	20.	1.000	0.927
1.5 h	20.	1.000	0.893
2.0 h	20.	1.000	0.865
3.0 h	20.	1.000	0.826
4.0 h	21.	1.000	0.786

Thickness = 0.55 m, Standard fire without decay.

Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.954
1.0 h	20.	1.000	0.933
1.5 h	20.	1.000	0.902
2.0 h	20.	1.000	0.876
3.0 h	20.	1.000	0.843
4.0 h	20.	1.000	0.805

Thickness = 0.60 m, Standard fire without decay.

Rating	T_M	ξ_{cM}	η
0.5 h	20.	1.000	0.957
1.0 h	20.	1.000	0.938
1.5 h	20.	1.000	0.909
2.0 h	20.	1.000	0.887
3.0 h	20.	1.000	0.854
4.0 h	20.	1.000	0.823