

Uniclass L322	EPIC F611
CI/SfB (2-)	Ff5
2006	

PD15



Product Data

Commodity Reinforced Beam Lintels to BS EN 845-2 : 2003

Lignacrete and Lignacite Reinforced Concrete Lintel

All units are 215 mm high and rectangular in cross-section. 215 mm long bearings should be provided at each end. The top face of the units is marked and this should be observed in handling and placing.

The following Table gives the section properties for each width of lintel. Dimensions are in mm, mass per unit area in kg/m², bending moments in kN.m and shear forces in kN.



Table 1

Unit Width (mm)	Material	Mass per Unit Area on Elevation	Moment Capacities			Shear Capacity Ultimate Limit State
			Visible Crack	Serviceability Limit State	Ultimate Limit State	
90	Lignacrete	195	2.0 ^a	5.0 ^b	9.3, 12.4 ^c	6.3 ^{c,d}
90	Lignacite	185	2.0 ^a	5.0 ^b	9.3, 12.4 ^c	6.3 ^{c,d}
100	Lignacrete	215	2.2 ^a	5.4 ^b	9.5, 12.7 ^c	7.0 ^{c,d}
100	Lignacite	205	2.2 ^a	5.4 ^b	9.5, 12.7 ^c	7.0 ^{c,d}
140	Lignacrete	300	3.1 ^a	8.2 ^b	14.1, 18.7 ^c	9.8 ^{c,d}
140	Lignacite	285	3.1 ^a	8.2 ^b	14.1, 18.7 ^c	9.8 ^{c,d}

Notes:

a) These values are based on test results divided by a factor of safety of 2.

b) These values are based on unfactored test results.

c) These values are based on BS 8110 and confirmed by testing. The lower ULS bending moment is for overall lengths up to 2240 mm, the higher figure for longer lengths.

d) These values apply to sections at a distance greater than 350 mm from the face of the bearings i.e. they are unenhanced by proximity to the bearings.

The following Table gives the mass of the units, the total loads over and above the self weight of the units which may be applied as an approximate UDL on the clear span without visible cracking and the maximum deflections under those loads. They are based on the values in Column 4 of Table 1.

Dimensions are in mm, masses in kg and loads in kN.

Table 2

Unit Width (mm)	Material	Overall Length	1115	1330	1565	1790	2015	2240	2465	2690
90	Lignacrete	Mass	47	56	66	75	85	94	-	-
90	Lignacite	Mass	44	53	62	71	80	89	-	-
		Total Load	13.0	13.0	11.8	10.1	8.9	7.9	-	-
100	Lignacite	Mass	52	62	72	83	93	104	-	-
100	Lignacrete	Mass	49	59	69	79	89	99	-	-
		Total Load	14.0	14.0	13.0	11.2	9.8	8.7	-	-
140	Lignacrete	Mass	77	89	105	120	136	153	170	187
140	Lignacite	Mass	68	82	96	110	125	139	153	167
		Total Load	20.0	20.0	18.4	15.7	13.8	12.2	11.0	10.2
Maximum Deflection : Less than 4mm for lintels upto 2240mm overall length										
: Less than 6mm for lintels 2240 to 2690mm overall length										

Notes:

Units of all lengths will carry a 45° triangle of dense masonry of the same thickness as the lintel without visible cracking. Moments and shears under other load configurations

should be assessed by a structural engineer using the data in Table 1. The self weight effects of the lintels need not be added to those of the imposed loads when using the moment and shear values given in

that Table. Loads up to 2.5 times the values given in Table 2 will be within the serviceability limit state and loads up to 4 times the values given in Table 2 will be within the ultimate limit state.

The following Table gives other properties of the materials/sections:

Table 3

Water Vapour Diffusion Coefficient μ		
Lignacrete and Lignacite	5/15 ^a	
Fire Resistance (hours)		
Material	90 & 100mm wide	140mm wide
Lignacrete	0.5	1
Lignacite	1	1.5
Water Absorption Coefficient by Capillary Action ($\text{g/m}^2/\text{s}^{0.5}$)		
Lignacrete	<600	
Lignacite	<500	
Thermal Conductivity (W/mK)		
(Based on tabulated values from BS EN 1745) at 3% m/c at 5% m/c		
Lignacrete*	1.33	1.43
Lignacite	1.35	1.45
Coating		
Lignacrete and Lignacite	Coating reference C1 unless otherwise ordered.	

Notes:

a) Units are frost resistant when built in accordance with BS 5628.

* Moisture contents by volume.