

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

PD2



Product Data

Lignacrete Range

Description

Lignacrete concrete blocks comprise a range of dense, high strength, loadbearing units, 440x215mm face size*, used in internal or external walls and manufactured from cement, sand and dense aggregates. Lignacrete blocks are medium grey in colour, with a granular surface texture. Lignacrete is a robust and durable block that provides a good background for fixing.

Lignacrete blocks are available as:

Lignacrete, available in all our standard sizes and forms:

- **Standard** - Suitable for locations where the surface will not be seen, ie, plastered or rendered.
- **Paint-Grade** - Suitable for locations where a consistent close textured face is required as a painting background.
- **Fair faced** - Suitable for locations where a consistent colour and close textured face is required. (Please notify the Sales Office when being used as Fair faced).

Uses

Suitable for use below DPC both internally and externally, and also for block and beam flooring.

Standards

Lignacrete blocks are kitemarked as conforming to BS EN 771-3 Aggregate Concrete Masonry Units. They comply to Category 1 Masonry Units and are manufactured under a comprehensive Quality Assurance Scheme assessed and certified to BS EN 9001:2000 by the BSI.

Fire

Lignacrete masonry units provide excellent fire resistant properties.

**Metric Modular (390x190mm) blocks are available to special order in 90mm, 140mm solid form, and 190mm widths in both solid & hollow form.*

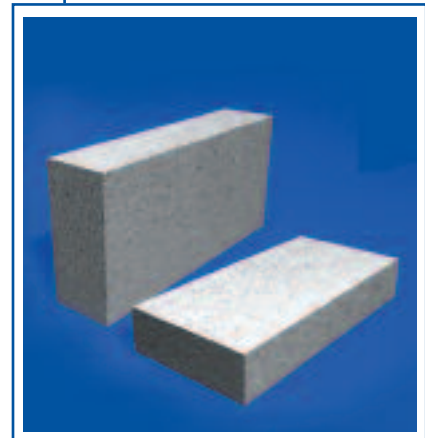
Note: Lignacite Ltd have introduced a range of 140mm width blocks that can be obtained in a high strength and density, whilst still complying with the

Manual Handling Legislation and guidance given in Construction Sheet Number 37.

Low Height Units (440 x 140 x 140). These units weigh between 17.3kg and 18.2kg each, depending upon strength.

290mm Long Units (290 x 140 x 215), these units weigh between 17.5kg and 18.5kg each depending upon strength. These units should be used where a high fk value is required.

Please contact our sales office regarding availability of these units.



Dimensional Tolerances

Category:	D1
Flatness of surface: (only applicable to paintgrade and fair faced units)	<2mm

Mean Unit Strength

Lignacrete:	7.3, 10.4, 17.5, 22.5 & 35N/mm ² (Solid form)
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Net Dry Density

Lignacrete <20.0N/mm ² :	2000kg/m ³
Lignacrete >20.0N/mm ² :	2100kg/m ³

Thermal Conductivity (W/mK)

Lignacrete <20.0N/mm ² :	Internally 1.33
Based on tabulated values from BS EN 1745	Externally 1.43
Lignacrete >20.0N/mm ² :	Internally 1.46
Based on tabulated values from BS EN 1745	Externally 1.56

Water Vapour Diffusion Coefficient μ

Lignacrete:	5/15
Based on tabulated values from BS EN 1745	

Moisture Movement

Lignacrete:	<0.8mm/m
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Water Absorption by Capillarity

Lignacrete:	<400g/m ² /S ^{0.5}
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Reaction to Fire

Classification:	A1
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Durability

Based on tabulated values from BS 5628-3 table 12	Frost resistant
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Bond Strengths

Based on tabulated values from BS EN 998-2 Annex C	0.15N/mm ²
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For information about shapes, see section PD10. For details of Hollow and Cellular blocks, see fig DC7 in Design Section. For information about the characteristic compressive strength of masonry fk, see section DC8.

Product Data

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Thermal Resistance - Table 1 <20N/mm²*

Width (mm)	Form	Thermal Resistance (m ² K/W)	
		3%	5%
75	Solid	0.056	0.052
90	Solid	0.068	0.063
100	Cellular	0.126	0.120
100	Solid	0.075	0.070
140	C/H	0.162	0.155
140	Solid	0.105	0.098
150	Solid	0.113	0.105
190	Hollow	0.195	0.187
190	Solid	0.143	0.133
200	Solid	0.150	0.140
215	Hollow	0.207	0.199
215	Solid	0.162	0.150
195 PW**	Solid	0.134	0.125

*For units above 20N/mm², contact Lignacite Technical Department
 **PW block figures based upon 30N/mm² block strength (unit size 440 x 195 x 65mm)

Fire Resistances (hrs) - Table 3***

Width (mm)	Form	Fire Resistance (hrs)	
		Loadbearing	Non Loadbearing
75	Solid	-	1
90	Solid	1	1.5
100	Cellular	-	0.5
100	Solid	2	2
140	C/H	-	3
140	Solid	2	3
150	Solid	2	4
190	Hollow	-	4
190	Solid	2	4
200	Solid	2	6
215	Hollow	-	6
215	Solid	2	6
195 PW	Solid	2	4

***Based upon single leaf with no finish

Sound Insulation Rw(C;Ctr)dB - Table 4

Width mm	Form	Sound Insulation Rw(C;Ctr)dB			
		Lightweight Plaster	Dense Plaster	Dry lined	Fair faced
75	Solid	48(-1;-4)	49(-1;-4)	46(-2;-7)	30(-1;-4)
90	Solid	50(-1;-4)	51(-1;-4)	48(-2;-7)	34(-1;-4)
100	Cellular	50(-1;-4)	51(-1;-4)	48(-2;-7)	36(-1;-4)
100	Solid	51(-1;-4)	52(-1;-4)	49(-2;-7)	37(-1;-4)
140	C/H	52(-1;-5)	53(-1;-5)	50(-2;-6)	44(-1;-4)
140	Solid	55(-1;-5)	56(-1;-5)	53(-2;-6)	47(-1;-4)
150	Solid	56(-1;-5)	57(-1;-5)	53(-2;-6)	49(-1;-4)
190	Hollow	55(-1;-4)	56(-1;-4)	54(-2;-6)	52(-1;-4)
190	Solid	57(-1;-4)	57(-1;-4)	56(-2;-6)	55(-1;-4)
200	Solid	57(-1;-4)	57(-1;-4)	56(-2;-6)	56(-1;-4)
215	Hollow	55(-1;-4)	56(-1;-4)	54(-2;-6)	53(-1;-4)
215	Solid	58(-1;-4)	58(-1;-4)	57(-2;-6)	57(-1;-4)
195 PW	Solid	57(-1;-4)	57(-1;-4)	56(-2;-6)	55(-1;-4)

Key: C/H=Cellular or Hollow.

Unit Weights - Table 2 <20N/mm²*

Width (mm)	Form	Unit Weights	
		Unit Weight (kg)	Weight laid inc Mortar (kg/m ²)
75	Solid	14.2	149
90	Solid	17.0	179
100	Cellular	15.5	165
100	Solid	18.9	198
140	C/H	20.0	214
140	Solid	26.5	278
150	Solid	28.4	298
190	Hollow	25.0	269
190	Solid	35.9	377
200	Solid	37.8	397
215	Hollow	27.5	297
215	Solid	40.7	427
195 PW*	Solid	11.7	400

Surface Finish Recommendations

- **Drylining**
Application to be as manufacturer's recommendations.
- **Dense Plaster**
Rake-back joints and apply stipple coat.
Apply either 1:1:6 cement:lime:sand or 1:4½ masonry cement:sand or 1:5½ cement:sand & plasticiser or designation Grade III mortar/render.
Alternatively: Thistle bonding or Thistle Hardwall or Knauf Ultimate backing plaster.
- **Finishing Coats**
Thistle plaster finish or Thistle multi finish or Knauf Multi cover.
- **External Rendering**
To be in accordance with BS 5262: 1991, using initial spatterdash coat, consisting of 1 cement, 1 sand, gauged with a proprietary bonding agent (SBR).

Sound Absorption - Table 5

Frequency (Hz)	Sound absorption coefficient a _p
125	0.15
250	0.30
500	0.30
1000	0.35
2000	0.30
4000	0.30
Weighted Sound Absorption Coefficient a _w	0.35
Classification of Sound Absorption	Class D

Sound Absorption coefficient (a_p) measurements of 100mm thicknesses of Lignacrete were made in the AIRO acoustics Laboratory. The measurements were made in 1/3 octave bands from 100Hz to 5000Hz in accordance with BS EN 20354: 1993.

From the results of the measurements the octave band Practical Sound Absorption Coefficient (a_p), single figure Weighted Sound Absorption Coefficient (a_w) and Sound Absorption Class have been determined in accordance with BS EN ISO 211654: 1997.