

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

PD1



Product Data

Lignacite Range

Description

Lignacite concrete blocks comprise a range of medium density loadbearing units, 440x215mm face size*, used in internal or external walls and manufactured from cement, sand and lightweight aggregates. Lignacite blocks are medium grey in colour, with a fine surface texture, providing exceptional sound reduction qualities.

These blocks provide the robustness of a dense block whilst still providing the benefits associated with a medium density block.

Lignacite blocks are available as:

Lignacite, 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).

Lignacite SP is only available in 140mm width solid blocks. This block consists of a specially formulated mix which reduces the block density, to produce a solid block under 20 kg. Available as Standard, Paint-Grade, Fair faced & GP finishes. Please note there will be a slight colour difference between the Traditional block and the SP.

Lignacite GP is only available in 100mm and 140mm solid form. These units have a striated face to provide a good key when plastering or rendering.

Uses

Suitable for use below DPC both internally and externally in 7.3N/mm² strength, and below DPC internally only, in 3.6N/mm² strength.

For block and beam flooring, 7.3N/mm² units are normally used.

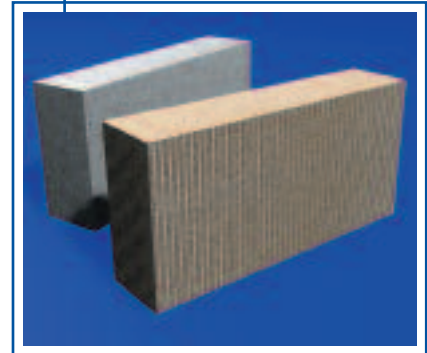
Standards

Lignacite 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

Lignacite 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.*



Dimensional Tolerances

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

Mean Unit Strength

Lignacite (all strengths):	3.6, 7.3 & 10.4N/mm ²
Lignacite SP	3.6 & 7.3N/mm ²

Net Dry Density

Lignacite (all strengths):	1570kg/m ³
Lignacite SP:	1450kg/m ³

Thermal Conductivity (W/mK)

Lignacite (all strengths):	Internally 0.90
Based on tabulated values from BS EN 1745	Externally 0.97
Lignacite SP:	Internally 0.79
Based on tabulated values from BS EN 1745	Externally 0.84

Water Vapour Diffusion Coefficient μ

Lignacite & SP:	5/15
Based on tabulated values from BS EN 1745	

Moisture Movement

Lignacite:	<0.8mm/m
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Water Absorption by Capillarity

Lignacite:	<500g/m ² /S ^{0.5}
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Reaction to Fire

Classification to EN 13501-1:	A1
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Durability

Based on tabulated values from BS 5628-3 table 12	3.6N/mm ² (not to be exposed)
	7.3+10.4N/mm ² (frost resistant)

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

Lignacite Range

Thermal Resistance - Table 1

Width (mm)	Form	Thermal Resistance (m ² K/W)	
		3%	5%
75	Solid	0.083	0.077
90	Solid	0.100	0.093
100	Cellular	0.165	0.156
100	Solid	0.111	0.103
140	C/H	0.210	0.200
140 ^{SP}	Solid	0.177	0.167
150	Solid	0.167	0.155
190	Hollow	0.246	0.235
190	Solid	0.211	0.196
200	Solid	0.222	0.206
215	Hollow	0.258	0.247
215	Solid	0.239	0.222

Unit Weights - Table 2

Width (mm)	Form	Unit Weight (kg)	Weight laid inc Mortar (kg/m ²)
90	Solid	13.4	143
100	Cellular	11.8	128
100	Solid	14.9	159
140	C/H	15.3	168
140 ^{SP}	Solid	19.2	206
150	Solid	22.3	238
190	Hollow	19.0	210
190	Solid	28.2	301
200	Solid	29.7	317
215	Hollow	20.8	231
215	Solid	31.9	340

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 ^{SP}	Solid	2	4
150	Solid	2	4
190	Hollow	-	4
190	Solid	2	4
200	Solid	2	6
215	Hollow	-	6
215	Solid	2	6

*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	43(-1;-4)	45(-1;-4)	45(-2;-6)	39(-1;-6)
90	Solid	44(-1;-4)	46(-1;-4)	45(-2;-6)	43(-1;-6)
100	Cellular	44(-1;-4)	46(-1;-4)	45(-2;-6)	43(-1;-6)
100	Solid	47(-1;-4)	48(-1;-4)	47(-2;-6)	46(-1;-6)
140	C/H	49(-1;-5)	50(-1;-5)	49(-2;-6)	47(-1;-6)
140 ^{SP}	Solid	51(-1;-5)	52(-1;-5)	51(-2;-6)	48(-1;-6)
150	Solid	52(-1;-5)	53(-1;-5)	52(-2;-6)	51(-1;-6)
190	Hollow	50(-2;-6)	51(-1;-6)	50(-2;-6)	49(-1;-6)
190	Solid	54(-2;-6)	54(-1;-6)	53(-2;-6)	53(-1;-6)
200	Solid	54(-2;-6)	54(-1;-6)	53(-2;-6)	53(-1;-6)
215	Hollow	51(-2;-6)	52(-1;-6)	51(-2;-6)	50(-1;-6)
215	Solid	54(-2;-6)	55(-1;-6)	54(-2;-6)	54(-1;-6)

Key: C/H=Cellular or Hollow.
^{SP}=SP is a lighter mix only available 140mm.

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	0.25
500	0.35
1000	0.40
2000	0.45
4000	0.45
Weighted Sound Absorption Coefficient a _w	0.40
Classification of Sound Absorption	Class D

Sound Absorption coefficient (a_p) measurements of 100mm thicknesses of Lignacite 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.