

Product Data

Lignacite

A range of fine textured, loadbearing units, suitable for facing and general purpose applications. Select from a range of sizes, strengths and grades for total design flexibility.



Description

- Medium density fine textured blocks in Fair-Faced, Paint-Grade and Standard block finish.
- For use in internal and external walls above and below ground.
- High levels of air tightness, fire protection and sound insulation

Lignacite blocks are available in the following grades;

> **Fair-Faced.** For locations requiring a consistent colour and close textured block face.

(When ordering please state blocks are for Fair-Faced use)

> **Paint-Grade.** For locations where a consistent close textured face is required as a background for direct painting

> **Standard.** For locations where the surface will not be visible e.g. plastered, use below ground.

Lignacite SP is available in a 140mm width solid block. It consists of a specially formulated mix which reduces the block density to produce a solid block under 20kg unit weight. It is available in all grades.

There is a slight colour difference between the traditional block and the Lignacite SP

Lignacite GP has a striated face, providing an enhanced key for plastering and rendering. It is available in 100 and 140mm solid form only.

Appearance

Lignacite blocks are medium grey in colour with a fine textured surface. Lignacite GP blocks have a scratched surface. Solid, cellular, and hollow block types are available.

Technical Properties

Face Size	440mm x 215mm
Dimensional Tolerances	Category: D1
Mean Unit Strength ⁽¹⁾	3.6, 7.3, 10.4N/mm ²
Net Dry Density	Lignacite(all strengths): 1570 kg/m ³ Lignacite GP and SP: 1450 kg/m ³
Thermal Conductivity @ 3% moisture content	Lignacite (all strengths): 0.90W/mK Lignacite GP and SP: 0.79 W/mK
Moisture Movement	<0.8mm/m
Reaction to Fire	Class A1
Air tightness	100mm solid (bare) - 4.17 m ³ /hr/m ² 100mm solid (painted) ⁽²⁾ - 0.34 m ³ /hr/m ² 140mm SP (bare) - 4.62 m ³ /hr/m ² 140mm SP (painted) ⁽²⁾ - 0.17 m ³ /hr/m ²
Notes: ⁽¹⁾ Cellular and hollow blocks are produced in 3.6 and 7.3N/mm ² strengths ⁽²⁾ Based on blocks painted to both faces	

Standards

Lignacite blocks are BSI Kitemarked certified to BS EN 771-3. They are Category 1 masonry units manufactured under a BSI approved certified Quality System complying with BS EN 9001.

Applications

Lignacite blocks are suitable for use in commercial and housing projects. Fair-Faced and Paint-Grade blocks can be used to construct internal walls in commercial, industrial and leisure buildings. Lignacite blocks can be used in the following locations:

- Inner and outer leaves of external cavity walls.
- Internal walls including fire break walls.
- Separating walls including those conforming to Robust Detail specifications.
- External and internal walls below ground (3.6N/mm² blocks can be used in both inner leaf and internal walls; 7.3N/mm² blocks to other locations).
- Infill units to beam and block flooring.
- Fair-Faced blocks are recommended for internal use.

Sound Insulation

Lignacite blockwork provides excellent levels of sound insulation between buildings and adjoining rooms. It can be used in party wall constructions to satisfy lightweight cavity wall specifications detailed in Approved Document E to the Building Regulations. It can also be used to construct party walls meeting Robust Detail specifications e.g. Robust Details E-WM-2, 4, 8,11,14,17 and 19.

Sustainability

Responsible sourcing

Lignacite Ltd. operates its manufacturing plants to a BSI certified Environmental Management System (EMS) complying with ISO14001. An EMS is also held by its key supply chain processes, as specified in the *Responsible sourcing* assessment criteria of BREEAM and the Code for Sustainable Homes. This assured level of responsible sourcing can contribute towards the required BREEAM rating or Code assessment.

Environmental ratings

Summary green guide ratings applicable to Lignacite blocks can be obtained from the BRE Green Guide to Specification.

Block weights - Table 1

Width (mm)	Form	Unit weight (kg)	Laid weight (kg/m ²)
75	Solid	11.1	118
90	Solid	13.4	143
100	Solid	14.9	159
100	Cellular	11.8	128
140	Solid ^(SP)	19.2	206
140	C/H	15.3	168
150	Solid	22.3	238
190	Solid	28.2	301
190	Hollow	19.0	210
200	Solid	29.7	317
215	Solid	31.9	340
215	Hollow	20.8	231

Notes: Weights are based on 3% moisture content by weight.
Lignacite GP unit and laid weights are approximately 8% lower than 100mm solid blocks shown above.

Thermal Resistances - Table 2

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

Note: 3% moisture content (m/c) should be used for protected locations such as the inner leaf, and 5% for exposed locations such as the outer leaf when rendered.

Sound reduction - Table 3

Width (mm)	Form	Sound Reduction Index, R _w (dB)			
		L/wt plaster	Dry lined	Paint finish	Fair faced
75	Solid	43	45	40	39
90	Solid	44	45	44	43
100	Solid	47	47	47	46
140	Solid ^(SP)	51	51	49	48
140	C/H	49	49	47	47
150	Solid	52	52	52	51
190	Solid	54	53	54	53
190	Hollow	50	50	50	49
200	Solid	54	53	54	53
215	Solid	54	55	55	54
200 to 215	2 x100mm leaves ⁽¹⁾	54	52	50-53	49-52
215	Hollow	51	51	51	50

⁽¹⁾ 2 leaves of 100mm solid blocks laid back to back and tied together

Notes:
1. The above values are based on technical assessments and tests to BS EN ISO 140-3.
2. Surface finishes are assumed to be applied to both wall faces.

Fire Resistances - Table 4

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

Note: The above values are for single leaf walls with no finish.

Design

The design of walls incorporating Lignacite blocks should be in accordance with BS 5628-Parts 1 and 2 or relevant European design standards and the requirements of the Building Regulations.

Surface Finish Recommendations

Drylining

Application to be as manufacturer's recommendations.

Dense Plaster

Apply either 1:1:6 cement:lime:sand or 1:4 ½ Masonry cement: sand or 1:5 ½ cement; sand and plasticiser. 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

Rendering to be in accordance with BS EN 13914-1. Avoid over strong mixes. Ensure the first coat of render is applied to a greater thickness than successive coats

Movement Control

Movement joints should be considered in accordance with BS 5628-3 at approximately 6.0 metre spacings. In areas of concentrated stress, such as those above and below openings, consideration should be given to the use of bed joint masonry reinforcement.

Mortar

The mortar type for work above ground level should be designation (iii) / Compressive Class M4. Stronger mixes may be used only with the permission of the designer. Stronger mixes may also be required for work below ground in accordance with BS 5628-3.

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