

FIBOLITE

MAKING LITE OF

THERMALS

STRONG & DURABLE

LOW MOISTURE

ACOUSTICS

THERMALLY EFFICIENT

LOAD BEARING & HIGH STRENGTH

ULTRA LIGHTWEIGHTS

LOW MOISTURE MOVEMENT

ACOUSTIC COMPLIANCE



FIBOLITE

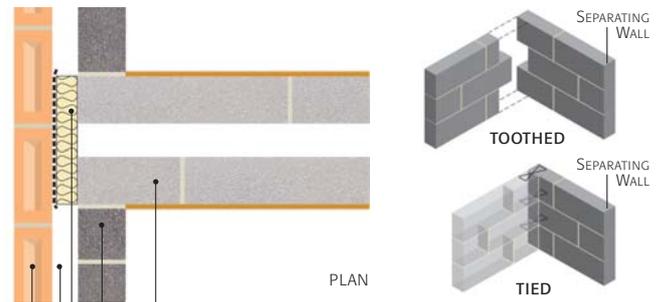
MAKING LITE OF PART E REGULATIONS

Recent amendments to **Robust Details Part E** (*Resistance to the Passage of Sound*) now permits the use of **Plasmor Fibolite blocks** in flanking walls in conjunction with **Plasmor Stranlite blocks** in the separating (*party*) wall. The amendments apply to **E-WM-2**, **E-WM-4** and **E-WM-11** wall types.

This revised regulation recognises the acoustic properties of **Fibolite blocks** in flanking wall applications and together with Fibolite's thermal performance, low moisture movement properties and its ultra lightweight, emphasises Fibolite as the building block of choice for the discerning specifier and builder.

EXTERNAL (FLANKING) WALL USING PLASMOR **FIBOLITE** BLOCKS

E-WM-2



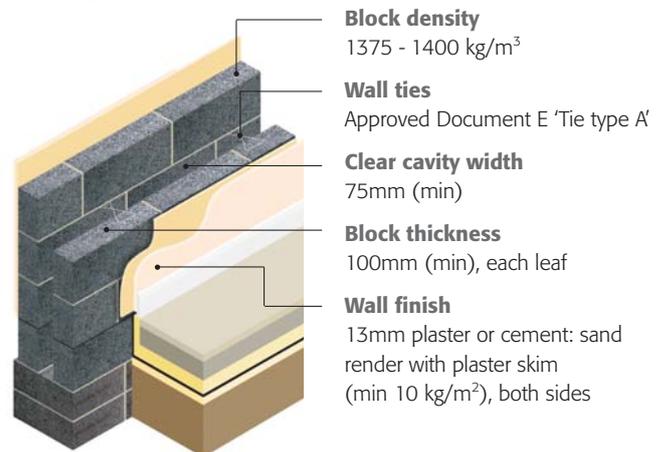
- Masonry outer leaf
- External wall cavity (minimum 50mm)
- Close cavity with a flexible cavity stop unless it is fully filled with built-in insulation
- Separating walls 100mm Plasmor Stranlite
- Inner leaf where there is no separating floor e.g. for houses
 - 100mm Plasmor Fibolite (850 - 950 kg/m³)
 - Internal finish - 13mm plaster or nominal 8kg/m² gypsum based board

SEPARATING WALL USING PLASMOR **STRANLITE** BLOCKS

E-WM-2

■ Plasmor Stranlite blocks

■ Wet plaster



External (flanking) wall Masonry (both leaves) with 50mm (min) cavity - clear, fully filled or partially filled with insulation

NOTE: Where there is a separating floor e.g. flats/apartments, the party floor is subject to pre-completion acoustic testing.

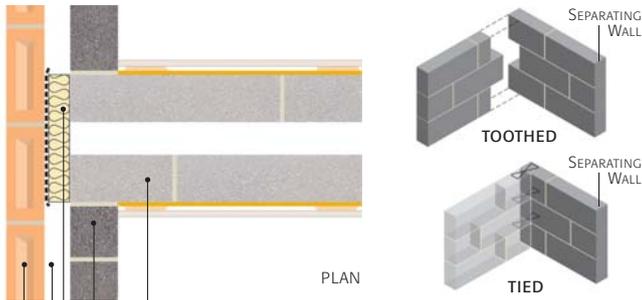
GOOD SITE PRACTICE

- Keep cavity and wall ties free from mortar dropping and debris
- Fully fill all blockwork joints with mortar
- Make sure there is no connection between the two leaves except for wall ties and foundations
- Keep any chases for services to a minimum and fill well with mortar



**EXTERNAL (FLANKING) WALL
USING PLASMOR *FIBOLITE* BLOCKS**

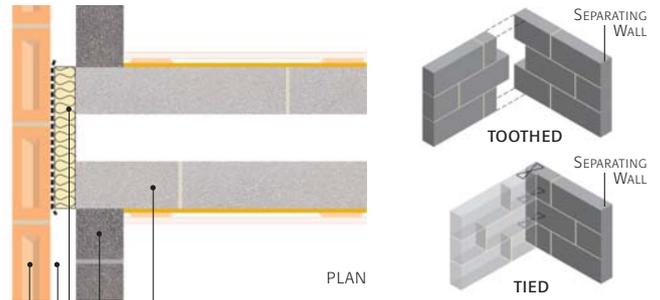
E-WM-4



- Masonry outer leaf
- External wall cavity (minimum 50mm)
- Close cavity with a flexible cavity stop unless it is fully filled with built-in insulation
- Separating walls 100mm Plasmor Stranlite
- Inner leaf where there is no separating floor e.g. for houses
 - 100mm Plasmor Fibolite (850 - 950 kg/m³)
 - Internal finish - 13mm plaster or nominal 8kg/m² gypsum based board

**EXTERNAL (FLANKING) WALL
USING PLASMOR *FIBOLITE* BLOCKS**

E-WM-11

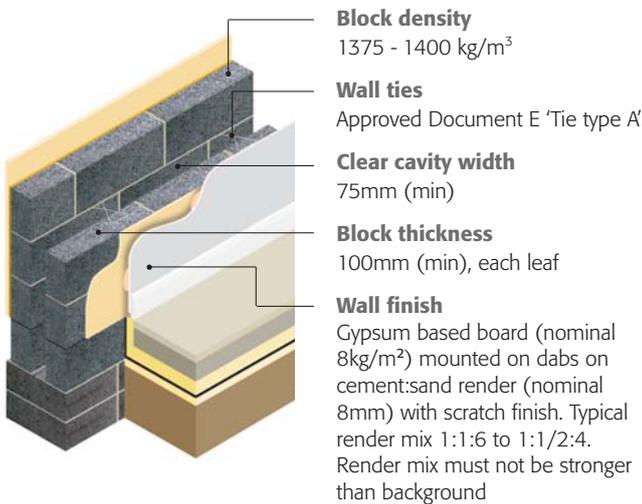


- Masonry outer leaf
- External wall cavity (minimum 50mm)
- Close cavity with a flexible cavity stop unless it is fully filled with built-in insulation
- Separating walls 100mm Plasmor Stranlite
- Inner leaf where there is no separating floor e.g. for houses
 - 100mm Plasmor Fibolite (850 - 950 kg/m³)
 - Internal finish - 13mm plaster or nominal 8kg/m² gypsum based board

**SEPARATING WALL
USING PLASMOR *STRANLITE* BLOCKS**

E-WM-4

- Plasmor Stranlite blocks
- Wet plaster



- Block density**
1375 - 1400 kg/m³
- Wall ties**
Approved Document E 'Tie type A'
- Clear cavity width**
75mm (min)
- Block thickness**
100mm (min), each leaf
- Wall finish**
Gypsum based board (nominal 8kg/m²) mounted on dabs on cement:sand render (nominal 8mm) with scratch finish. Typical render mix 1:1:6 to 1:1/2:4. Render mix must not be stronger than background

External (flanking) wall Masonry (both leaves) with 50mm (min) cavity - clear, fully filled or partially filled with insulation

NOTE: Where there is a separating floor eg. flats/apartments, the party floor is subject to pre-completion acoustic testing.

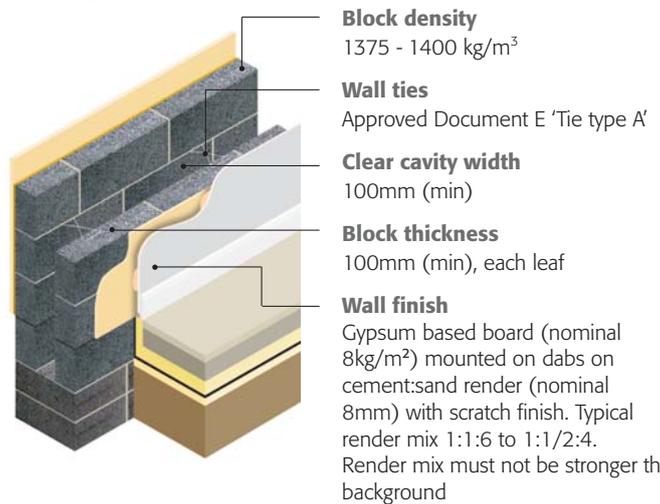
GOOD SITE PRACTICE

- As previous, plus - ensure that render is applied to the complete face of each leaf with a scratch finish (it may be omitted within the floor joist/beam zone)

**SEPARATING WALL
USING PLASMOR *STRANLITE* BLOCKS**

E-WM-11

- Plasmor Stranlite blocks
- Wet plaster



- Block density**
1375 - 1400 kg/m³
- Wall ties**
Approved Document E 'Tie type A'
- Clear cavity width**
100mm (min)
- Block thickness**
100mm (min), each leaf
- Wall finish**
Gypsum based board (nominal 8kg/m²) mounted on dabs on cement:sand render (nominal 8mm) with scratch finish. Typical render mix 1:1:6 to 1:1/2:4. Render mix must not be stronger than background

External (flanking) wall Masonry (both leaves) with 50mm (min) cavity - clear, fully filled or partially filled with insulation

NOTE: Where there is a separating floor eg. flats/apartments, the party floor is subject to pre-completion acoustic testing.

GOOD SITE PRACTICE

- As previous, plus - ensure cavity is 100mm wide and that correct wall ties are used.



PLASMOR EXPANDED CLAY

HISTORIC PERSPECTIVE

For three decades during the 1960's, 70's and 80's the staple raw material for quality lightweight aggregate block manufacture was Coal Fired Power Station Furnace Bottom Ash. During this period many coal fired power stations were contributing base load electricity supply to the National Electricity Grid and were being supplied by a myriad of UK collieries. Furnace bottom ash is the residue of burning coal and provides a strong, light, totally inert block making aggregate.

THE CHANGING ENERGY MARKET

During the late 1980's and early 90's the UK Energy market witnessed significant and dramatic changes. Due to political, economic and environmental pressures a high proportion of UK collieries and coal fired power stations were irreversibly closed down. This presented an acute dilemma to the lightweight aggregate block industry; how to secure future long-term supplies of quality lightweight aggregate. The choices facing the industry were numerous; consider expensive and unreliable imported aggregate, move to heavier quarried virgin aggregates, source sub-standard secondary aggregates or simply rely on the residual supply of power station furnace bottom ash. Considering the "Dash for Gas", the conversion of some coal fired power stations to oil burning and the increasing pressures of the Environmental Movements, these were not options of merit for Plasmor.

FOCUS ON EXPANDED CLAY

In 1990 the Plasmor Board of Directors committed the company to an extensive and exhaustive research and development project with the expressed intention of developing a totally new, reliable, long term supply of premium quality sustainable block making aggregate. Over a number of years the Company trialed a great many raw materials and processes including reclaimed and recycled materials all to little avail.

The future was undoubtedly found in Expanded Clay. After years of geological and chemical research, laboratory testing and incremental pilot testing the Company decided to pursue expanded clay, and pioneered the expanded clay process in the UK. Expanded clay nodules are produced by sophisticated pyrogenic technology whereby geochemically specific clay is expanded in a rotary kiln at high temperature. The first Plasmor expanded clay kiln was commissioned in 2000 and represented the biggest single investment in the Company's history.

Plasmor view expanded clay as the key to the sustainable and ecological future of concrete block manufacture as it absolves the need for expensive imports and lowers the use of virgin, hard, quarried aggregates such as limestone, granite, sand and gravel. Use of expanded clay in lightweight aggregate blocks offers customers a number of important benefits:-

- **Lighter blocks giving faster laying rates and CDM 20kg compliance**
- **Thermal and Acoustic Building Regulation approval**
- **Consistent High Quality means less wastage on site due to breakages**
- **Lower moisture movement (not greater than 0.60mm/m) giving greater structural performance**
- **Consistent block structure giving excellent fixability**
- **Totally inert material giving greater fire resistance**
- **Class 1 aggregate as defined in BS 5628 -3**
- **Guaranteed consistent supply of quality block making aggregate**

FIBOLITE - MAKING LITE OF PART L REGULATIONS

EXAMPLES OF U-VALUES ACHIEVED USING FIBOLITE BLOCKS



BLOCKWORK
100mm **FIBOLITE**
INSULATION
100mm Isover CWS
INTERNAL FINISH
Plasterboard on dabs

U-Value = **0.27W/m²K**



BLOCKWORK
100mm **FIBOLITE**
INSULATION
50mm Kingspan TW50, clear cavity
INTERNAL FINISH
Plasterboard on dabs

U-Value = **0.26W/m²K**



BLOCKWORK
100mm **FIBOLITE**
INSULATION
100mm Ecobead Platinum
INTERNAL FINISH
Plasterboard on dabs

U-Value = **0.26W/m²K**



BLOCKWORK
100mm **FIBOLITE**
INSULATION
100mm Dritherm Cavity Slab 32
INTERNAL FINISH
Plasterboard on dabs

U-Value = **0.25W/m²K**



BLOCKWORK
100mm **FIBOLITE**
INSULATION
125mm Isover Hi Cav 32
INTERNAL FINISH
Plasterboard on dabs

U-Value = **0.21W/m²K**



BLOCKWORK
100mm **FIBOLITE**
INSULATION
100mm Xtratherm CavityTherm
INTERNAL FINISH
Plasterboard on dabs

U-Value = **0.18W/m²K**

FULL FILL CAVITY (3.6N)

BRICK OUTER LEAF	Isover CWS Superwall 36			Knauf Dritherm 37			Isover Hi-Cav 32 Knauf Dritherm 32 Superwall 32		
	k value	0.036			0.037			0.032	
Finish	100mm	125mm	150mm	100mm	125mm	150mm	100mm	125mm	150mm
100mm Fibolite Plasterboard on Dabs*	0.27	0.23	0.20	0.28	0.23	0.20	0.25	0.21	0.18

* Wall tie with a 6.2mm cross sectional area.

PARTIAL FILL CAVITY (3.6N)

BRICK OUTER LEAF	Xtratherm Cavity Wall Kingspan TW50 Celotex CW4000					
	k value	0.022				
Finish	50mm	60mm	75mm	90mm	100mm	
100mm Fibolite Plasterboard on Dabs*	0.26	0.23	0.20	0.18	0.16	

* Wall tie with a 6.2mm cross sectional area. 50mm cavity maintained with a minimum R value of 0.644

The illustrations shown here are just a few examples of wall constructions that achieve 0.27 W/m²K or better.

FOR FURTHER INFORMATION OR CALCULATIONS CONTACT OUR **TECHNICAL DEPARTMENT:**
01977 673221

FULL FILL CAVITY (3.6N)

BRICK OUTER LEAF	Xtratherm CavityTherm Full Fill**				
	k value	0.021			
Finish	75mm	90mm	100mm	125mm	150mm
100mm Fibolite Plasterboard on Dabs*	0.23	0.20	0.18	0.15	0.13

* Wall tie with a 6.2mm cross sectional area. ** 5mm projecting HIP accounted for.

FIBOLITE

FEATURES & BENEFITS



ONE HAND LIFT

ULTRA LIGHTWEIGHT – IMPROVES LAYING RATES



ULTRA LIGHTWEIGHT

SATISFIES CDM REGULATIONS



THERMALLY EFFICIENT

SIMPLE SOLUTIONS TO 'U' VALUES DOWN TO
 $U = 0.13W/M^2K$



ACOUSTIC COMPLIANCE

PART 'E' ROBUST DETAIL FOR FLANKING WALLS



STRONG AND DURABLE

LOWER WASTAGE THAN ALTERNATIVE
ULTRA LIGHTWEIGHTS



LOADBEARING AND HIGH STRENGTH

$3.6N/mm^2$, $7.3N/mm^2$



LOW MOISTURE MOVEMENT

NOT GREATER THAN 0.60mm/m



FIXABILITY

DIRECT NAILING, EASY AND SPEEDY TO DRILL
AND PLUG



EASILY CUT AND CHASED

SAVES TIME AND EFFORT



AUTHORITY

MANUFACTURED to BS EN 771-3



QUALITY MANAGEMENT STANDARD

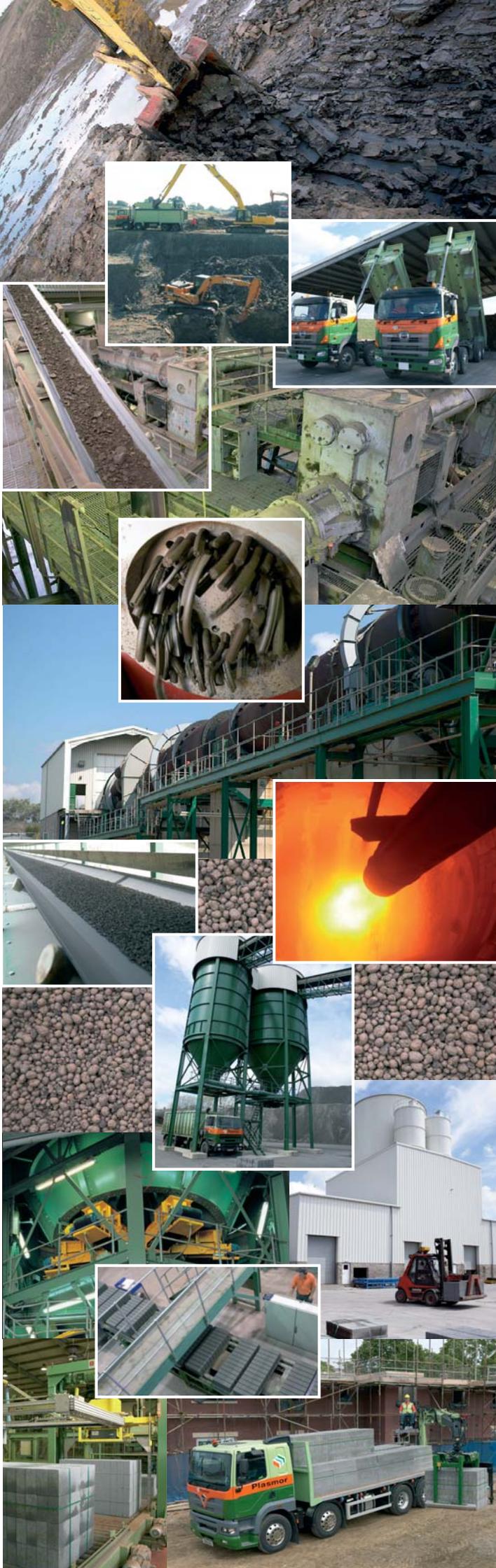
BS EN ISO 9001 Certificate No: FM 10847



ENVIRONMENTAL MANAGEMENT SYSTEM

BS EN ISO 14001 Certificate No: EMS 536819

BEWARE OF IMITATIONS!



“The future is secure
and we’re all fired up
about expanded clay”

EXPANDED CLAY GIVES MARKET BOOST TO FIBOLITE

The upsurge in demand for ultra lightweight “aggregate” blocks which satisfy CDM regulations, meet builders needs for thermal performance down to $0.13W/m^2K$ and comply with Part E Acoustic regulations in flanking walls, has led to unprecedented demand for Plasmor **FIBOLITE** blocks.

Such has been the success of the first expanded clay kiln and the demand for **FIBOLITE** that in 2007 Plasmor successfully commissioned a second kiln to meet demand.

Plasmor now operate the only two expanded clay kilns in the UK, both the most hi-tech, sophisticated, fuel efficient and environmentally clean plants in Europe.

Concurrent with the expansion of expanded clay production, the Company have acquired secure, long term sources of the very specific clay required for the process.

**TECHNICAL HELPLINE:
01977 673221**

