

# FENLITE BACKGROUND 1500

## Technical Datasheet

V3 12-24



### PRODUCT APPLICATIONS

(Numbers in the table relate to the notes below)

| BLOCK WIDTH / COMPRESSIVE STRENGTH             | CAVITY WALLS EXTERNAL LEAF BELOW DPC | CAVITY WALLS EXTERNAL LEAF ABOVE DPC | CAVITY WALLS INNER LEAF BELOW DPC | CAVITY WALLS INNER LEAF ABOVE DPC | SOLID EXTERNAL WALLS BELOW DPC | SOLID EXTERNAL WALLS ABOVE DPC | SEPARATING WALLS | INTERNAL PARTITIONS | BEAM & BLOCK FLOORS | SUITABLE FOR RENDERING |
|--|--------------------------------------|--------------------------------------|-----------------------------------|-----------------------------------|--------------------------------|--------------------------------|------------------|---------------------|---------------------|------------------------|
| 100mm / 3.6N                                   | X                                    | ✓<br>4                               | X                                 | ✓                                 | X                              | ✓<br>4                         | ✓<br>5           | ✓                   | X                   | ✓                      |
| 100mm / 7.3N                                   | ✓<br>1, 2, 3                         | ✓<br>4                               | ✓<br>1, 2                         | ✓                                 | ✓<br>1, 2, 3                   | ✓<br>4                         | ✓<br>5           | ✓                   | ✓<br>6              | ✓                      |
| 100mm / 10.4N                                  | ✓<br>1, 2, 3                         | ✓<br>4                               | ✓<br>1, 2                         | ✓                                 | ✓<br>1, 2, 3                   | ✓<br>4                         | ✓<br>5           | ✓                   | ✓<br>6              | ✓                      |
| 140mm / 3.6N <span style="color:red">⚠</span>  | X                                    | ✓<br>4                               | X                                 | ✓                                 | X                              | ✓<br>4                         | ✓<br>5           | ✓                   | X                   | ✓                      |
| 140mm / 7.3N <span style="color:red">⚠</span>  | ✓<br>1, 2, 3                         | ✓<br>4                               | ✓<br>1, 2                         | ✓                                 | ✓<br>1, 2, 3                   | ✓<br>4                         | ✓<br>5           | ✓                   | X                   | ✓                      |
| 140mm / 10.4N <span style="color:red">⚠</span> | ✓<br>1, 2, 3                         | ✓<br>4                               | ✓<br>1, 2                         | ✓                                 | ✓<br>1, 2, 3                   | ✓<br>4                         | ✓<br>5           | ✓                   | X                   | ✓                      |

#### Notes:

- Products suitability in this application is subject to the block achieving the site's soil / groundwater DS classification requirements.
- Blocks must have either a minimum compressive strength of 7.3N/mm<sup>2</sup> or a minimum density of 1500 kg/m<sup>3</sup> when used below DPC level.
- Blocks in the external leaf from DPC level to 150mm below ground level must not be left exposed. Suitable products such as clay bricks of Class B Engineering properties or "F2" durability in accordance with BS EN 771-1 should be specified in this zone, alternatively blocks may be covered with a suitable protective finish.
- For all external leaf applications, the block requires a suitable impervious coating or finish applied. Blocks must not be left exposed when used on the external leaf.
- Product suitability in this application is subject to the block achieving the walls specification requirements for sound reduction or those specification criteria set in the Robust Detail selected.
- For beam and block infill applications, aggregate blocks must have a minimum compressive strength of 7.3 N/mm<sup>2</sup>.
- The Paint Grade block is a premium product which is manufactured to produce a close face texture and technically can be used in this situation. Commercially, suitable background blocks may be a more suitable specification in this situation.

- Calculated values Rw(db). On-site testing values may be lower.

Products should be designed and constructed in accordance with all relevant Legislation, Building Regulations, European & British Standards, Acts, Codes of Practice and manufacturers recommendations.

Specifications should ensure that the product meets all technical properties suitable for the required application.

Please refer to Building Regulations, Approved Document A and the Project Structural Engineer for minimum wall thickness, block compressive strength and characteristic strength requirements - specification varies subject to numerous factors which include loading, block orientation, restraint, wall height and length.

Block weights based on gross density plus 10% @ 5% (Evalast products) or 15% (Fenlite products) moisture content (typical received), moisture equilibrium approximately 3% (protected) and 5% (exposed).

NPD No performance declaration - please contact Forterra for further information.

\*Manufactured to special order only. ⚠ CAUTION HEAVY ITEMS >25kg.

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### PRODUCT TECHNICAL PROPERTIES

Blocks are manufactured to BS EN 771-3.

#### Material Properties

|   |  |  |
|---|--|--|
| Thickness (mm):   | 100  | 140 <span style="color: red;">▲</span> |
| Face Sizes – L x H (mm):  | 440 x 215  |  |
| Dimension Tolerance Classification:   | D1   |  |
| Dimension Tolerance – Length:   | (+3mm -5mm)  |  |
| Dimension Tolerance – Height:   | (+3mm -5mm)  |  |
| Dimension Tolerance – Width:  | (+3mm -5mm)  |  |
| Unit Weight, Gross Density + 10% @ 15% Moisture (kg):   | 18.0   | 25.1                                   |
| Configuration:  | Group 1 (Solid)  |  |
| Category:   | II   |  |
| Mean Compressive Strength (N/mm <sup>2</sup> ):   | 3.6, 7.3, 10.4   | 3.6, 7.3, 10.4                         |
| Gross Dry Density (Kg/m <sup>3</sup> ):   | 1500   |  |
| Thermal Conductivity - $\lambda_{10}$ , dry unit, S1 (W/m.K):   | 0.5  |  |
| Design Thermal Conductivity - Protected (3%) (W/m.K):   | 0.56   |  |
| Design Thermal Conductivity - Exposed (5%) (W/m.K):   | 0.61   |  |
| Design Thermal Conductivity - Below Dpc Level (W/m.K):  | NPD  |  |
| Thermal Resistance - Protected (3%) (m <sup>2</sup> .K/W):  | 0.179  | 0.25                                   |
| Thermal Resistance - Exposed (5%) (m <sup>2</sup> .K/W):  | 0.164  | 0.23                                   |
| Sound Reduction – Un-finished (RW dB):  | 45.1 <sup>8</sup>  | 48.3 <sup>8</sup>                      |
| Fire Resistance (Hours) (NA to BS EN 1996-1-2) –<br>Non-load Bearing Single Leaf walls (Criteria EI):         | NPD  |  |
| Fire Resistance (Hours) (NA to BS EN 1996-1-2) –<br>Load Bearing Single Leaf walls (Criteria REI) $\leq$ 1.0: | NPD  |  |
| Load Bearing Single Leaf walls (Criteria REI) $\leq$ 0.6:   | NPD  |  |
| Reaction to Fire (BS EN 13501):   | A1   |  |
| Durability Against Freeze / Thaw:   | Not to be left exposed   |  |
| Water Vapor Permeability:   | 5/15   |  |
| Dimensional Stability - Moisture Movement (mm/m):   | < 1.5 mm/m   |  |
| Vapour Resistivity (MN.s/g.m):  | 75   |  |
| Soil or Groundwater DS Classification:  | DS1 <sup>2</sup>   |  |
| Shear Bond Strength (N/mm <sup>2</sup> ):   | 0.15   |  |
| Movement Joint Detail   | Vertical movement joints at 6m centres and not more than half that spacing from a corner |  |

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