

## BLOCKS, PANELS AND SMALL PRECAST ELEMENTS FOR USE IN CONSTRUCTION

STRONG, FIREPROOF, LIGHTWEIGHT INSULATING PRODUCTS INCORPORATING LATERLITE EXPANDED CLAY

Thanks to their unique mix of intrinsic properties, Laterlite Expanded Clay lightweight granules are ideal for manufacturing blocks and small precast concrete elements, and give numerous other advantages.



### PRINCIPAL CHARACTERISTICS

#### Good thermal performance

Combined with their high thermal inertia, the insulating characteristics of insulating blocks manufactured from expanded clay make them ideal for use in both cold and warm climates, giving the advantages of thermal comfort and reduced heating and cooling costs.

#### Acoustic insulation

The high degree of porosity of Laterlite Expanded Clay, in combination with the specific design of the block or product, gives excellent insulation even at reduced thicknesses.

#### Fire resistance

Laterlite Expanded Clay is a naturally non-combustible, insulating, refractory product that is easy to manufacture in blocks with high fire resistance. These are ideal for constructing fire-break walls and parts of buildings that are to be used at high temperatures or will be in direct contact with fire.

#### Mechanical strength

The strength of blocks based on expanded clay is comparable to that of best-quality concrete blocks. They can therefore be used to construct loadbearing masonry, including in earthquake zones.

#### Weight reduction

Expanded clay blocks significantly reduce structural loading as compared to traditional products, and are ideal both for reconstruction work and new construction. This enables the design of loadbearing structures to be simplified.

#### Ease of installation and transport

Expanded clay blocks are used in the same way as traditional blocks but thanks to their lower density they are much easier to handle and transport.

#### Good durability

Expanded clay blocks are made from a 100% mineral non-degradable product that cannot be attacked by parasites (fungus, rodents, insects, etc.) and is resistant to aggressive environments and freeze-thaw cycles.

### LATERLITE KNOW-HOW AT YOUR SERVICE

Thanks to its 50 years of experience Laterlite is the leading Italian manufacturer of blocks and other products based on expanded clay. In addition to its own three block manufacturing plants it has 200 manufacturer clients and a network of partner companies throughout Italy that are members of ANPEL (the National Association of Expanded Clay Element Manufacturers). The experience and know-how of Laterlite are at the service of international partners wishing to develop and manufacture blocks or related products based on expanded clay. For further information please contact our Technical and Sales Offices.



The thermal performances of brick walls on site not only depend on the block, but also the mortar.

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### BLOCKS FOR CONSTRUCTION

- **Thermal blocks for the external building envelope**  
Thanks to the insulation and thermal inertia (attenuation and phase shift) of blocks based on expanded clay, winter and summer comfort is guaranteed. Composite blocks with incorporated insulation can also be manufactured for constructing extremely energy-efficient buildings in cold climates.
- **Sound-insulating blocks**  
Excellent performance (up to 57 dB) even without additional insulation.
- **Lightweight blocks for partition walls**  
A single, solid, thin, equippable layer gives excellent acoustic insulation and fire resistance without excessively loading floor slabs.
- **Blocks for loadbearing masonry, including in earthquake zones**  
High-strength blocks and construction systems can be used to construct all parts of buildings, including those that are designed to comply with the most recent antiseismic criteria
- **Fire-break blocks**  
Blocks based on expanded clay can be used to construct thin walls that have excellent REI or EI fire ratings, for civil use (in multi-storey or underground car parks, boiler rooms, stair and lift wells, etc.) and industrial situations (warehouses, etc.)



### REFRACTORY ELEMENTS

Laterlite Expanded Clay associated with refractory binders is widely used in the manufacture of various elements where high temperatures or contact with fire are expected such as:

- Chimneys
- Fireplaces
- Barbecues
- Precast ovens

It is also used to produce ready mixed concrete and mortars

### RECONSTITUTED STONE (CULTURED AND VENEER STONE)

The use of expanded clay reduces the weight of reconstituted stone mixes but does not reduce their strength and makes them easier to apply.



### SUSPENDED FLOOR SLAB COMPONENTS

Laterlite Expanded Clay can also be used to reduce the weight of concrete on rafters infill of beam and block floors and roof slabs.

### PANELS FOR EXTERNAL WALLS

Full-height panels for partitions or facades that incorporate Laterlite Expanded Clay reduce weight, give better thermal, acoustic, and fire resistance performance, and are easier to manoeuvre and install.

### SOUND-ABSORBENT PANELS

These are available in a range of formats and designs. The porosity of the expanded clay reduces noise propagation when the panels are used in the vicinity of urban transport infrastructure or industry.

