

Laterlite Plus



A SPECIAL, DRY, HYDROPHOBIC, INSULATING, STRONG, NATURAL, NON-COMBUSTIBLE LIGHTWEIGHT AGGREGATE

FOR USE IN DRY CONSTRUCTION SYSTEMS, AS INSULATING BACKFILL, FOR INSULATION IN FOUNDATIONS AND EARTH RETAINING WALLS, AND IN LIGHTWEIGHT LIME/CEMENT CONCRETES

Laterlite Plus is a lightweight expanded clay aggregate of very low capillarity that is manufactured by expanding special natural clays at high temperature (1200°C). It is supplied either as granules in a range of sizes or, by request, as a crushed version, with a peculiar set of characteristics.

CHARACTERISTICS

Dry and hydrophobic

Thanks to its exclusive manufacturing process, Laterlite Plus is dry and does not retain water. In construction, it is suitable for all typical situations where Laterlite Expanded Clay is used, particularly where humidity has to be minimal (in dry screeds, in proximity to moisture-sensitive materials, etc.).

Effective against rising damp and with good drainage capacity

Thanks to the hydrophobic properties of Laterlite Plus, when it is laid in contact with the ground it protects structures and finishes from capillary rising damp. It will not retain water and drains it away.

Lightweight, insulating, and robust

Its porous internal structure makes it lightweight (from approx. 320 kg/m³), thermally insulating (from lambda [] 0.09 W/mK), and sound-absorbent. The ceramic "clinkered" outer shell surrounding the granules makes them very hard with good resistance to compression.

Easy to mix with binders

Laterlite Plus binds well with cement, hydraulic lime, and resins, and since it does not require pre-wetting it makes mortars and concretes easier to mix, improves their workability, and reduces drying time.

Extremely stable and durable

Laterlite Plus will not rot, cannot be attacked by parasites (fungus, rodents, insects, etc.), is resistant to acids, bases, solvents, and freeze-thaw cycles, is dimensionally stable and non-deformable, and retains its properties unaltered over time; for all practical purposes this material will last forever.

Non-combustible and fire-resistant

Laterlite Plus is a 100% mineral non-combustible product (Euroclass fire rating – A1) that is fire-resistant and safe, including in the presence of fire. It is widely used in refractory applications.

A natural material

Thanks to its use of natural raw materials, its manufacturing process, which respects the environment, and the total absence of harmful emissions (even in the presence of fire), Laterlite Plus is ideal for sustainable construction as certified by ANAB-ICEA, the Italian Accreditation Institute.



TECHNICAL CHARACTERISTICS

Denomination	2/3	3/8	8/20	0/4 FRT
Density in kg/m ³ (approx.)	440	350	320	520
Resistance to granule fragmentation N/mm ²	≥ 3,0	≥ 1,5	≥ 1,0	≥ 3,5
Certified thermal conductivity λ W/mK	0,10	0,09	0,09	0,12
Reaction to fire	Euroclass fire rating A1 (non-combustible)			

Package:

bags each of 50 litres. on non-returnable wooden pallets.
2/3: 60 bags/pall. - 3,0 m³/pall.; 3/8: 75 bags/pall. - 3,75 m³/pall.;
8/20: 75 bags/pall. - 3,75 m³/pall.

By request, the 3/8 and 8/20 denominations can be consigned on pallets each holding 35, 50, or 65 bags.

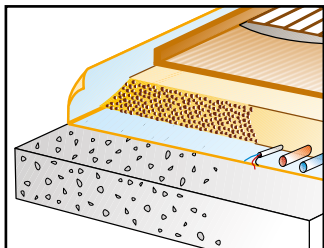
Refer to the Technical Data Sheet and the Safety Information Sheet.

PRINCIPAL APPLICATIONS

DRY USE

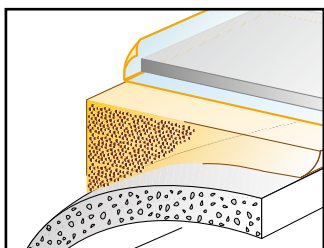
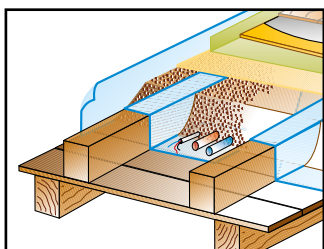
Dry screeds

Laterlite Plus 2/3 in granular form is used as a continuous lightweight levelling, compensating, and insulating screed. It does not require compaction and can be applied in thicknesses of 1 cm and above. When used as part of a screeding system it can be finished by laying specific types of panelling (SmartPly OSB, plasterboard, fibreboard, chipboard, etc..) to take the flooring.



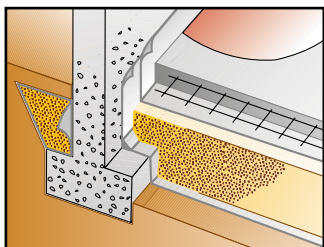
Lightweight insulating backfill

Laterlite Plus Expanded Clay in granular form of 3/8 size can be used as insulating backfill between rafters and joists in timber suspended floors to improve thermal and acoustic performance whilst excluding humidity and not increasing the fire load. Its high strength enables it to support the weight of the finishing layers and it is also ideal as lightweight insulating backfill on top of vaulted structures.



Insulation and humidity control in contact with the ground

Laterlite Plus 8/20 in granular form is ideal for quickly creating backfilled underfloor voids to prevent rising damp. Its excellent stability and durability also enables it to be used at ground floors as a reliable hardcore layer below a ground slab or under foundations. It can also be used as insulation, drainage, or to reduce the thrust of basement retaining walls. The layer thickness can be controlled by using special TermoBag modular packs.



APPLICATIONS WHEN MIXED WITH BINDERS

Laterlite Plus binds well with cement, hydraulic lime, and resins, and because it does not require pre-wetting it makes mortars and non-structural concretes easier to mix, improves their workability, and reduces drying time. Mortars and lightweight concretes mixed with Laterlite Plus are suitable for the same uses as for Laterlite Expanded Clay. The top surface of loose Laterlite Plus can also be consolidated with a cement slurry (see p. 6).



CEMENT	
Porous lightweight concrete	
Laterlite Plus 3/8	1000 L
Cement 32,5	150 kg
Water	50 -60 L

HYDRAULIC LIME	
Porous lightweight concrete	
Laterlite Plus 3/8	1000 L
Hidraulic Lime NHL 5 or 3,5	350 kg
Water	220-230 L

Lightweight concrete	
Laterlite Plus 3/8	700 L
Cement 32,5	280 kg
Sand	380 L
Water	200 L

Lightweight concrete	
Laterlite Plus 3/8	1000 L
Hidraulic Lime NHL 5 or 3,5	385 kg
Sand	380 L
Water	210-220 L