

## LECA® LIGHTWEIGHT AGGREGATE 10MM - 20MM (GEOTECHNICAL APPLICATION)

Leca® LWA has been used extensively in structural and geotechnical projects for over 60 years for lightening road and railway embankments, insulating and filling of swimming pool surrounds, reducing pressure within quay extensions, lightweight fill in foundations and behind retaining walls, general load compensation, within structural elements, insulating and lightening pipelines, drainage and insulating sports pitches and courts, lightening the load over tunnels and bridge development and much more.



### Solutions

Leca® LWA has been used extensively in structural and geotechnical projects for over 60 years for lightening road and railway embankments, insulating and filling of swimming pool surrounds, reducing pressure within quay extensions, lightweight fill in foundations and behind retaining walls, general load compensation, insulating and lightening pipelines, lightening the load over tunnels and bridge development.

### Primary Properties

- 85%\* less bulk density
- 75%\* reduction of horizontal earth pressure to retaining structures
- Reduced settlement periods and increased stability
- Superb insulating and free drainage properties
- Class A1 (non-flammable)
- Resistant to extreme temperatures, moisture and chemical attack
- 100% inert and contains no harmful substances or gases
- Requires less vehicles for delivery – up to 70m<sup>3</sup> per load
- Speed of site installation – up to 16 times faster production\*
- \* on average when compared to traditional fills

### Simple Compaction

Leca® Lightweight fill (LWA) is much faster and easier to place than traditional fills due to its light weight, rounded nature. Installation layers of up to 1 metre in depth can be easily achieved which will help save program time and cost.

### Accelerated Compaction

- Compaction of Leca® LWA requires substantially less compaction effort when compared to conventional fills including Type 1 Fill and GSB Type Fill.
- A value adding property (unique to LECA LWA) is the ability for vehicles to continue operations over the placed material without the risk of potential surface crushing.
- Leca® LWA can be placed in the same way as other conventional aggregates. This can be either by tipping and spreading using a tracked dozer, or tracked excavator.
- Compaction of Leca® LWA material requires substantially less compaction effort when compared to conventional fills - layer depths can be greater, typically up to 1000mm.
- Compaction can be conducted using a vibrating plate compactor with a maximum ground bearing pressure of 50kN/m<sup>2</sup>.
- Typically, 3-4 passes of this vehicle are required to limit potential surface crushing of the Leca® LWA compaction layer.
- Compaction is expected to provide a reduction in volume of 8-12% with the average being approximately 10%.
- Where thinners layers of Leca® LWA are required i.e. 150 - 600mm, the compaction equipment should be limited to a vibrating plate compactor if feasible.

In difficult to access areas, Leca® can be pneumatically installed using the Leca® blowing vehicle (see below).

## Delivery

Depending on the project requirement and location, we will source the vehicles to best suit the project requirement from Crossrail Compliant to FORS Registered.

### Delivery Methods

- **WALKING FLOOR**

Up to 70 cubic metres of Leca® Lightweight Expanded Clay Aggregate per delivery

- **8 WHEEL RIGID**

Up to 25-30 cubic metres of Leca® Lightweight Expanded Clay Aggregate per delivery

- **ARTIC TIPPER**

Up to 40-55 cubic metres of Leca® Lightweight Expanded Clay Aggregate per delivery

- **BLOWING VEHICLE**

Up to 55 cubic metres of Leca® Lightweight Expanded Clay Aggregate per delivery

- **CURTAIN SIDED VEHICLE**

Can carry 50L Bags and 2.2m<sup>3</sup> Bulk Bags of Leca® Lightweight Expanded Clay Aggregate per delivery

- **FLATBED WITH/ FOR CRANE OFFLOAD**

For delivery of 50L bags and bulk bags of Leca® Lightweight Expanded Clay Aggregate

**For more information on your delivery requirements please [Contact Us](#).**

*\* Please note vehicle capacities are approximate and subject to change depending on environmental conditions.*

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Innovate..  
With our  
In-Office CPD



We offer UK wide in-office **CPD** seminars (with lunch included) which provides an **in depth study of Leca® LWA** and its unique properties within **structural** and **geotechnical applications**.

Key areas covered:

- **Geotechnical Engineering** (Highways, Rail, Bridges, Pneumatic Infill of Redundant Structures)
- **Water Management** (Landscaping, Flood Prevention)
- **Coastal Protection** (Sheet Pile, Caisson Structures)

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