

Bi-foam GFA160 10/80mm Glass Foam Aggregate

INSTALLATION INSTRUCTIONS

1. **Bi-foam** is an aerated glass foam aggregate manufactured from 100% recycled waste glass and having a significant benefit of being lightweight with a loose density typically 130-170kg/m³.

2. Uses of **Bi-foam** include:
 - Load bearing thermal insulation beneath floor slabs and providing a complete replacement for traditional hardcore, blinding, over site concrete and expanded polystyrene insulation construction or precast beam and block and polystyrene insulation flooring.
 - Load bearing thermal insulation beneath foundations
 - Light weight fill for embankments

3. **Bi-foam** is chemically inert and complies with requirements for Environmental Compatibility. It does not present any hazard to the Health and Safety of persons involved with its installation or use.

4. **Bi-foam** is non-combustible, frost resistant, self- draining and unattractive to vermin.

5. **Site preparation and general execution:**
 - Excavate to formation level and trim/remove any loose material to provide a uniform surface. Inspection/approval of formation as required.
 - Install drainage system/capillary moisture barrier if required.
 - Install non-woven geotextile 120-150gm/m² or similar approved separation membrane which is to be wrapped up the edges of the completed **B-foam** installation and lapped with the surface NON WOVEN geotextile – see below.
 - Install **B-foam** - see below for placing and compaction requirements.
 - After compaction is completed boarding should be used over the compacted Bi-foam to prevent disturbance of the top layer of granules, while other building elements / services are constructed.
 - Install NON WOVEN geotextile 120-150gm/m² or similar approved to compacted surface of **Bi-foam**

6. Placing and compaction requirements of Bi-foam:

- Placing in the work area is undertaken by dumper or wheel barrow and simply, easily and quickly spread to the required loose thickness by hand using rakes.
- Compaction ratio i.e. loose to compacted state 1.3:1.
- Minimum compacted thickness 160mm.
- Maximum compacted layer thickness 300mm subject to the size and compactive effort of the compaction plant to the employed.
- For design thickness greater than 300mm, placing and compaction is to be undertaken in equal layers. Layer thickness to be subject to the size and compactive effort of the compaction plant to be employed.
- Maximum compacted thickness beneath floor slabs and foundations 900mm.
- Number of passes with plate compactor: 2 (max.3). No benefit is gained to the loading capacity of the floor slab by further compaction – you just use more product.
- Typical compaction plant for floor areas:
 - Vibrating plate compactor with a dead weight of 90 – 120kg
 - 100Hz
 - Centrifugal force: 18KN

7. Thickness guidance for placing and compaction of Bi-foam

Loose thickness (mm)	Compacted thickness (mm)
195	160
260	200
390	300
455	350
520	400
585	450

8. When using **Bi-foam** beneath foundations, placing and compaction is to be under the supervision of a competent person. Compaction is to be confirmed via the use of nuclear density test(s). Probe depth 300mm.