Load Reduction Methods

The Load Reduction Methods aim to decrease load/earth pressure working on soft ground and structures by means of light-weight and self-standing material prepared by mixing artificial lightweight material with surplus soil from the construction site.

The Load Reduction Methods include EPS Block Method, Air Bubble Cement Method, Air Bubble Mortar Method and Lightweight Mixed Treatment Soil Earth Method, that are available for selection to meet the requirements of the site.

- **Features**
  1. Density, strength and fluidity can be set at desired levels according to design and execution conditions.
  2. As EPS blocks are very light in weight, they can be stacked manually.
  3. Air bubble cement, air bubble mortar and lightweight mixed treatment soil can be transferred by pumping, where compaction is not necessary.
  4. The lightweight mixed treatment soil method can efficiently use surplus soil from the construction site.

- **Classification by Material Characteristics**

- **Application Examples**
  - **Widened Fill (Earth Pressure Reduction)**
  - **Back-fill (Earth Pressure Reduction)**
  - **Back-filling (Load Reduction)**
  - **Fill on Soft Ground (Earth Pressure Reduction, Countermeasure against Settlement)**

- **Applicable Types of Soil with Specified Solidifier**

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<th>Method Name</th>
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<td>Light Weighted Soil</td>
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- **Materials to Be Used**
  - Soil Displaced by Construction
  - Purchased Sand
  - Water
  - Solidifier (Cement)
  - Air Bubble
  - Styrofoam Block
  - Beads