Product Technical Statement (PTS)

Cupolex Ecodome Concrete Cavity System

Product Description and Use

Cupolex Ecodome is a structural dome creating a sacrificial permanent formwork, for reinforced concrete foundations for slab-on-ground.

Cupolex Ecodome plastic dome shaped concrete forms are stay-in-place forms to create unreinforced or reinforced concrete floor slabs on grade. Concrete is poured over the modular dome forms to create floating or structural grade supported slabs, partially supported or fully supported slabs on beam, piles or deep foundations.
The Cupolex Ecodome system forms an under-slab void that can be passively or mechanically vented to remove moisture and soil gases.

The domes lock together, and have additional built-in plastic at all pressure point locations including a central reinforced cone to absorb vibrations which occur during the laying and finishing of the floor slab.

The domes are manufactured in NZ from 100% recycled plastic.

New Zealand Building Code

Cupolex Ecodome system, if used, designed, installed and maintained in accordance with the statements and conditions of the relevant BRANZ, CodeMark and Technical Literature, will meet the following provisions of the NZBC:

Clause B1 STRUCTURE: Performance B1.3.1, B1.3.2 and B1.3.4 for loads arising from self-weight, wind, impact and creep. [i.e. B1.3.3 (a), (h), (j) and (q)].

Clause B2 DURABILITY: Performance B2.3.1 (b) 15 years and B2.3.2.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2.
Clause F2 HAZARDOUS BUILDING MATERIALS: Performance

Cupolex Ecodome is an Alternative Solution in terms of New Zealand Building Code compliance.

Evidence of Compliance

CodeMark Certificate CMNZ10026, or BRANZ Appraisal No.1221

Scope of Use

Cupolex Ecodome system for buildings using:

- The CUPOLEX® Ecodome™ System is a concrete floor system intended for use within slab-on-ground floors for either timber-framed buildings within the scope limitations of NZS 3604, or steel-framed buildings within the scope limitations of NASH Standard Part Two, or where floor slabs are subject to Specific Engineering Design.
- The CUPOLEX® Ecodome™ System can be designed using design details from the Technical Literature when built on: 'good ground' and 'TC1' type ground within the 'Canterbury earthquake region', as defined by the Acceptable Solutions and Verification Methods for NZBC Clause B1 Structure; or, ground with an ultimate bearing capacity of minimum 200 kPa pressure (as defined in the Technical Literature) and with all other classification details of 'good ground' or 'TC1' type ground within the 'Canterbury earthquake region'
- When built on 'TC2' type ground within the 'Canterbury earthquake region', or moderately to highly expansive soils, the CUPOLEX® Ecodome™ System is subject to Specific Engineering Design, as well as to verification and assessment by a Chartered Professional Engineer.
- Compliance with NZBC Clause H1 Energy Efficiency is dependent on project-specific details (including supplementary insulation where required), Other Conditions or Limitations

