SmartCONCRETE

GRAPHENE ADDITIVE

Modular Precast Construction

Manufacture of 20m² housing modules with lightened concrete **WITHOUT REINFORCING STEEL** and with economic savings thanks to the use of "Suspensions reinforced with graphene and fibers - Perlite - Light concretes" (SPL concretes)

Use of mixing components approved for light suspended perlite concretes according to the European concrete standard EN 206
Component definition: Cement, synthetic fibers, limestone powder, perlite, graphene-based additive combinations, stabilizers, sand, gravel and water.

Technical solutions:

A) High resistance concrete modules class LC 50/52

- Concrete - density of 1700-1900 kg/m³
- Resistance to compression cubic specimen 10x10 cm: min. 50 N/mm²
- Resistance to flexotraction prismatic specimen: 4.8 Mpa
- Thermal conductivity: approx 0.55 W/mK
- Acoustic protection: > 53 dB
- SCC lightweight concrete

B) LC 24/26 modules with low load capacity

- Concrete - density 1400-1600 kg/m³
- Resistances to compression cubic specimen 10x10 cm: min. 25-30 N/mm²
- Resistance to flexotraction prismatic specimen: 3.2 Mpa
- Thermal conductivity: about 0.45 W/mK
- Acoustic protection: > 53 dB
- SCC lightweight concrete

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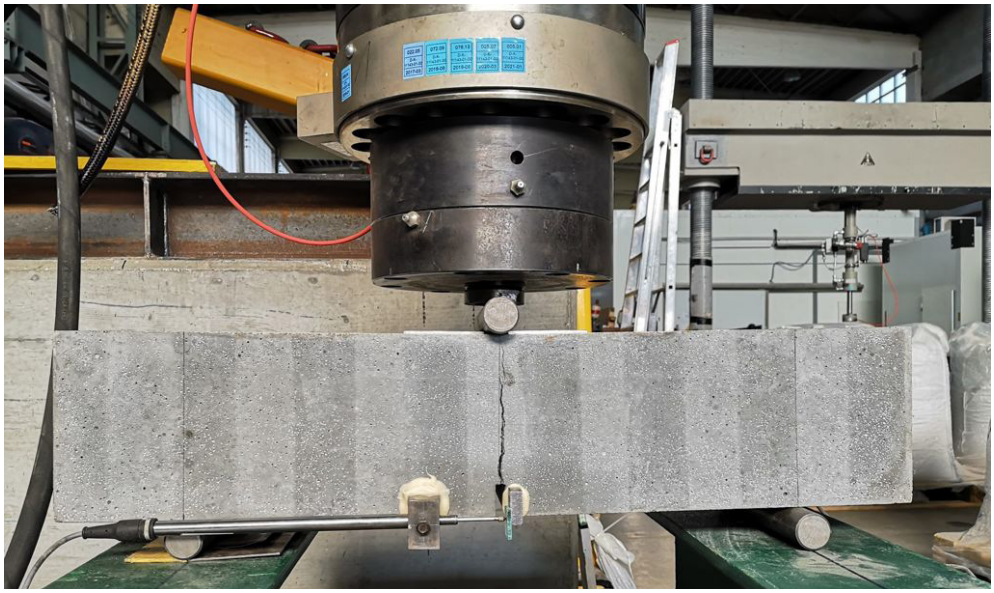
Advantages SPL vs Standard Concrete

- Economic savings in raw materials and manufacturing
- Economic savings in transport, handling and assembly
- Efficient and sustainable
- Savings in CO_2 emissions
- Weight reduction
- Good thermal insulator
- Good acoustic insulation
- Greater durability thanks to the **ABSENCE OF STEEL**



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