Cyanobacteria biomineralized material for offshore applications

A cyanobacteria biomineralized material optimized for offshore applications to reduce CO_2 pollution, applicable for above and under water use and temporary construction, by experimenting with its components.







Living organism

Synechococcus **sp. PCC 7002**

Bio mixture

Sand type:
Beach sand

Cyanobacteria optical density:
0, 0.3, 0.6, 1,2 & 2.4

Biomineralization time:
18 hours, 2 days & 7 days

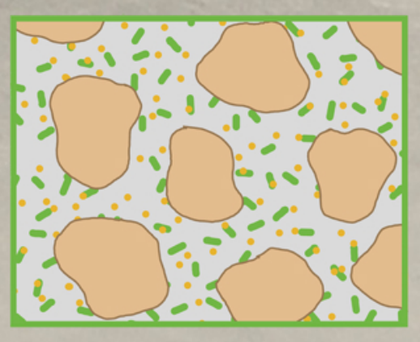
Binder:
Gelatine & agar

Post processing

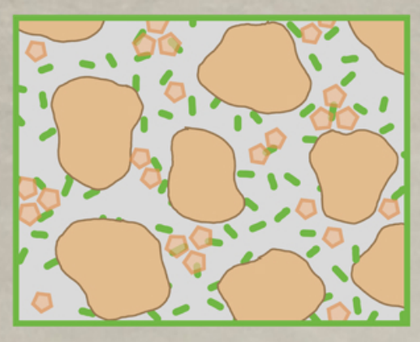
Curing time: *0 days, 7 days, 14 days & 21 days*

Protection coating:
Dragon skin 30, Ecoflex 00-10, agar & no coating

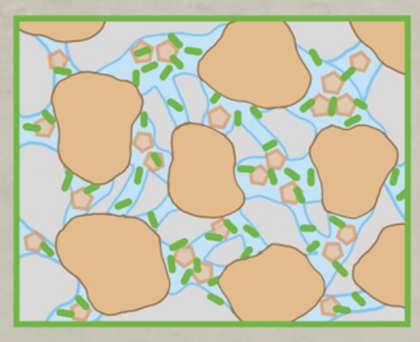
Process of forming the material



Sand, cyanobacteria, nutrients and gelatine are mixed



The cyanobacteria form crystals



Crystals strengthen connections

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