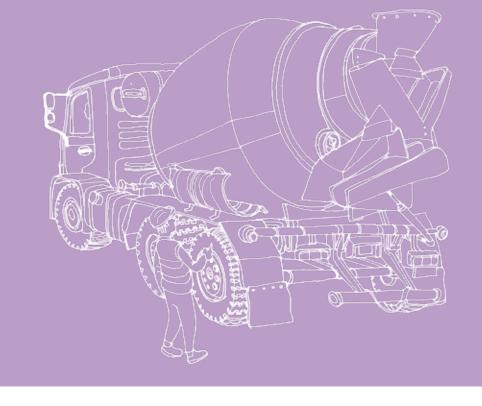
Returned Concrete with Zero Impact







THE INNOVATIVE PRODUCT FOR THE SUSTAINABLE RECOVERY OF RETURNED CONCRETE



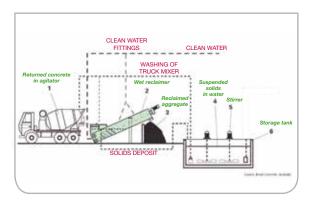
The global production of concrete amounts to a total of **10 billion m³/year**.

Out of this total, approximately **50 million m³** of concrete is never actually used and is returned to the production plant. Considering just 10% of this total as "critical", meaning not recyclable while fresh, this translates into **5 million m³** of returned concrete requiring treatment every year.

Returned concrete has a high environmental impact on concrete plants and leads to extra operating costs.



Current systems for treating returned concrete do not offer a sustainable solution in that they:



- 1 Have a negative impact on the environment
- 2 Do not make the best use of potentially recyclable material
- Increase overall operating costs

RE-CON ZERØ and **RE-CON** ZERØ **EVO** are solutions to these problems, making the most of returned concrete by transforming it into granular material that can be re-used as aggregate in concrete.

- No waste produced
- Added directly into the truck mixer
- No treatment plants required



The pursuit of sustainable development depends on our capacity to guarantee the total interconnection between the **economy**, **society** and the **environment**. These three elements must never be considered as single, independent entities, but rather analysed within a systemic framework as elements which, together, contribute to the achievement of a common goal. This means that every programmed intervention must take all reciprocal inter-relations into consideration. If a programmed intervention focuses on only one or two of these aspects, a condition of sustainability will not be achieved. In view of these considerations, it would be preferable to represent the sustainability of development as three concentric circles, highlighting how **the economy exists within a society, and how both exist within the environment**. And from this consideration, it is possible to construct a **pyramid of sustainability**, with the environment forming the base which, through its supply of natural resources, services the ecosystem and wellbeing of society and plays a fundamental support role for the economy and society. And with this in mind, the advantages deriving from the use of **RE-CON** ZERØ and **RE-CON** ZERØ **EVO** may be summarised as follows:

ENVIRONMENTAL ADVANTAGES:

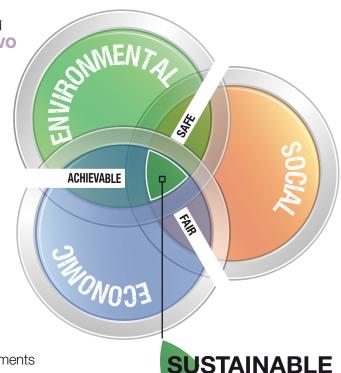
- With RE-CON ZERØ and RE-CON ZERØ EVO, returned concrete may be completely re-utilised, thus reducing the amount of waste material to be disposed of.
- With RE-CON ZERØ and RE-CON ZERØ EVO, the amount of recycled material employed increases, thus reducing the impact caused by the extraction and processing of virgin materials.
- With RE-CON ZERØ and RE-CON ZERØ EVO, the amount of materials transported by road decreases, due to the fact that part of the aggregates are produced at concrete plants.

SOCIAL ADVANTAGES:

Its ease of use and absence of hazardous, toxic and carcinogenic substances contained in **RE-CON** ZERØ and **RE-CON** ZERØ **EVO** all contribute to improving the health and safety in the work environment.

ECONOMIC ADVANTAGES:

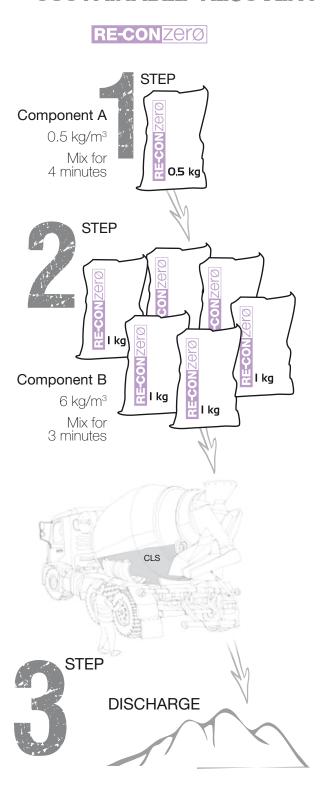
- The use of **RE-CON** ZERØ and **RE-CON** ZERØ **EVO** transforms one cubic metre of returned concrete into more than two tonnes of quality aggregate.
- The use of RE-CON ZERØ and RE-CON ZERØ EVO saves disposal costs for returned concrete and considerably reduces the amount of sludge created during washing cycles.
- The use of **RE-CON** ZERØ and **RE-CON** ZERØ **EVO** allows all returned concrete to be recycled without costly investments into machinery or equipment.



RE-CONZEIØ RE-CONZEIØ EVO

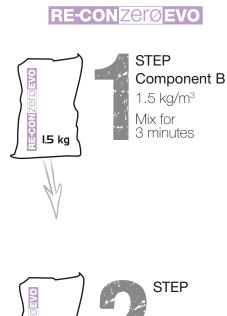
Returned Concrete with Zero Impact

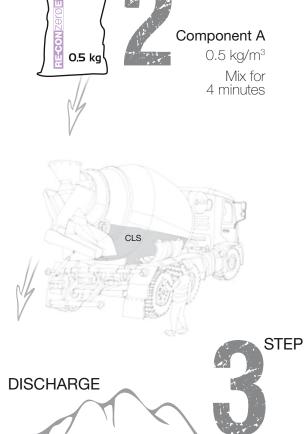
SUSTAINABLE RECOVERY OF RETURNED CONCRETE



Complete kit to treat 1 cubic metre of returned concrete:

RE-CON ZERØ **Component A**: 1x0.5 kg water-soluble bag **RE-CON** ZERØ **Component B**: 6x1 kg water-soluble bags





Complete kit to treat 1 cubic metre of returned concrete:

RE-CON ZERØ **EVO Component B**: 1x1.5 kg water-soluble bags **RE-CON** ZERØ **EVO Component A**: 1x0.5 kg water-soluble bags



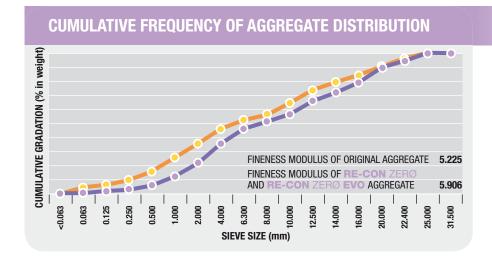






After mixing for a few minutes with **RE-CON** ZERØ or **RE-CON** ZERØ **EVO**, concrete is transformed into granular material which may be discharged on the ground and, once cured, used as aggregate in concrete. **RE-CON** ZERØ or **RE-CON** ZERØ **EVO** work with all types of concrete.

After discharging the material, the mixing drum is left clean. The **cleaning water** for the mixer drum **may be completely recycled** and used again for mixing.

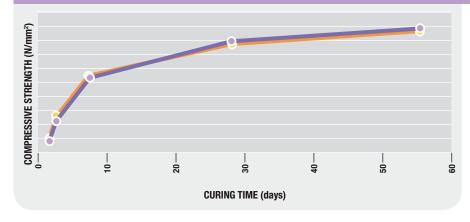


RE-CON ZERØ and RE-CON ZERØ EVO

aggregates meet the requirements of EN 12620:2008 "Aggregates for concrete".

- Original aggregates
- RE-CON ZERØ and RE-CON ZERØ EVO aggregates

DEVELOPMENT OF Rck - CONCRETE WITH COARSE AGGREGATES SUBSTITUTED WITH 50% RE-CON ZERØ E RE-CON ZERØ EVO



RE-CON ZERØ and RE-CON ZERØ EVO

aggregates may be used to partially substitute coarse aggregates (up to 50%) in the production of concrete.

- Original aggregates
- RE-CON ZERØ and RE-CON ZERØ EVO aggregates

HEADQUARTERS MAPEI SpA

Via Cafiero, 22 - 20158 Milan Tel. +39-02-37673.1 Fax +39-02-37673.214

Internet: www.mapei.com E-mail: mapei@mapei.it

