



Press release Paris, April 28, 2015

# LAFARGE AND SOLIDIA COMMERCIALIZE A NEW LOW-CARBON SOLUTION FOR THE CONSTRUCTION SECTOR

Lafarge has reached a new milestone in its partnership with US start-up Solidia Technologies® with the signing of an agreement to commercialize an innovative technology allowing a significant reduction in the environmental footprint of pre-cast concrete.

The patented technology allows lower  $CO_2$  emissions in the cement production process and utilizes  $CO_2$  in precast concrete manufacturing. It reduces the carbon footprint of the end-to-end process by up to 70%.

Under the terms of this agreement, Lafarge will have the right to commercialize this technology worldwide. Lafarge will offer a complete solution (sustainable cement and CO<sub>2</sub>-cured concrete) in partnership with Solidia.

Commercial launch will first take place in some key markets in North America and in Europe for the manufacturing of concrete elements such as paving stones, roof tiles and concrete blocks.

This partnership illustrates Lafarge's commitment to bring to the market innovative solutions contributing to building better cities. Lafarge has been working for over 20 years to reduce its environmental footprint and, in particular, its CO<sub>2</sub> emissions. These have been reduced by 26% per ton of cement since 1990.

# A breakthrough technology

Solidia has developed a new binder made from similar raw materials to Ordinary Portland Cement and produced in a traditional rotary kiln. It is produced at lower temperatures and through a different chemical reaction that generates less CO<sub>2</sub>.

Used afterwards in the manufacture of precast concrete, Solidia Cement<sup>TM</sup> hardens through the addition and absorption of  $CO_2$  ('carbonation'), in a patented curing process that reduces the overall carbon footprint by up to 70%.

Produced at traditional precast concrete manufacturing facilities, Solidia Concrete<sup>™</sup> is higher performing and reaches full strength in less than 24 hours, compared to 28 days for precast concrete made using Ordinary Portland Cement. This offers considerable energy savings and cost reductions to precast concrete manufacturers.



### A successful partnership

Lafarge has collaborated with Solidia Technologies since 2013 to industrialize this technology.

Lafarge researchers and technical experts worked with Solidia to demonstrate the feasibility of commercial-scale production in a conventional cement plant. In April 2014, a joint group of Lafarge and Solidia scientists validated the reduced carbon footprint and commercial viability of Solidia cement during a full-scale trial at Lafarge's Whitehall cement plant in the US. The cement produced has subsequently been used by a variety of pre-cast customers in North America and Europe to further validate Solidia's curing technology and to produce blocks, pavers and roof tiles for commercial testing. Collaborative testing performed with many customers in recent months has demonstrated both the superior quality of Solidia concrete products and their cost competitiveness.

In December 2014, Lafarge invested in Solidia Technologies and joined Solidia's Board of Directors.

### About Solidia Technologies®

Solidia Technologies® makes it easy and profitable to use CO<sub>2</sub> to create superior and sustainable building materials. Solidia's patented technology starts with a sustainable cement, cures concrete with CO2 instead of water, reduces carbon emissions up to 70%, and recycles 60 to 100% of the water used in production. Using the same raw materials and existing equipment as traditional concretes, the resulting CO2-cured concrete products are higher performing, cost less to produce, and cure in less than 24 hours. Currently in commercialization for large- and small-scale applications, Solidia's R&D collaborators include Lafarge, The Linde Group, DOT's Federal Highway Administration, DOE's National Energy Technology Laboratory, Rutgers University, Purdue University, Ohio University, and the University of South Florida. Solidia was named to the 2014 Global Cleantech 100, the 2013 R&D Top 100, a 2014 Best Place to Work in NJ, a finalist in both the 2014 CCEMC Grand Challenge First Round and the 2013 Katerva Award, and shortlisted to MIT's Climate CoLab. Based in Piscataway, N.J. (USA), Solidia's investors include Kleiner Perkins Caufield & Byers, Bright Capital, BASF, BP, Lafarge, Total Energy Ventures, Bill Joy and other private investors. Follow Solidia Technologies at www.solidiatech.com and on LinkedIn, YouTube and Twitter: @SolidiaCO2

### About Lafarge

A world leader in building materials, Lafarge employs 63,000 people in 61 countries, and posted sales of €12.8 billion in 2014. As a top-ranking player in its Cement, Aggregates and Concrete businesses, it contributes to the construction of cities around the world, through its innovative solutions providing them with more housing and making them more compact, more durable, more beautiful, and better connected. With the world's leading building materials research facility, Lafarge places innovation at the heart of its priorities in order to contribute to more sustainable construction and to better serve architectural creativity. More information is available on Lafarge's website: www.lafarge.com

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