

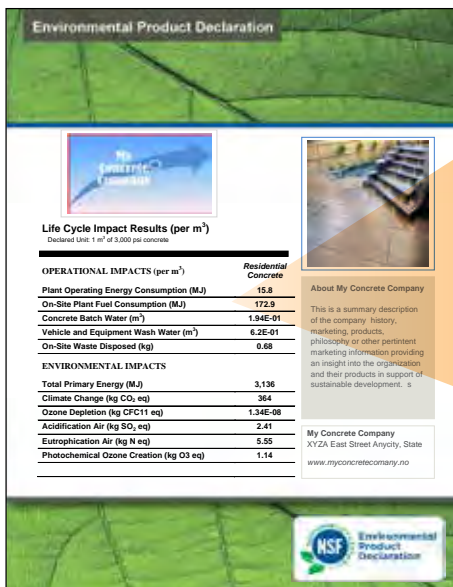
# Concrete Technology in Focus

## Environmental Product Declaration (EPD) Service

For concrete and concrete products

### Overview

An Environmental Product Declaration (EPD) is an ISO 14025 Type III environmental label that presents relevant and verified environmental information about goods and services from a life cycle perspective. It is similar to a nutrition label but reports environmental impacts based on a detailed life cycle assessment. A concrete product EPD reports the cradle-to-gate environmental impacts specific to an individual concrete mixture or concrete product. The BASF EPD service provides a professional report that has been third-party reviewed and registered with the Program Operator.



Environmental Product Declaration	
<b>Life Cycle Impact Results (per m<sup>3</sup>)</b>	
Declared Unit: 1 m <sup>3</sup> of 3,000 psi concrete	
OPERATIONAL IMPACTS (per m <sup>3</sup> )	
	<i>Residential Concrete</i>
Plant Operating Energy Consumption (MJ)	15.8
On-Site Plant Fuel Consumption (MJ)	172.9
Concrete Batch Water (m <sup>3</sup> )	1.94E-01
Vehicle and Equipment Wash Water (m <sup>3</sup> )	6.2E-01
On-Site Waste Disposed (kg)	0.68
ENVIRONMENTAL IMPACTS	
Total Primary Energy (MJ)	3,136
Climate Change (kg CO <sub>2</sub> eq)	364
Ozone Depletion (kg CFC11 eq)	1.34E-08
Acidification Air (kg SO <sub>2</sub> eq)	2.41
Eutrophication Air (kg N eq)	5.55
Photochemical Ozone Creation (kg O <sub>3</sub> eq)	1.14

\* Reported categories in an EPD will vary based on the PCR requirements.

# Environmental Product Declaration (EPD) Service

## What are the benefits of creating an EPD?

Building designers and architects are more and more interested in the environmental impacts of products that they are specifying for their projects. In LEED v4 for example, an EPD supports the Materials and Resources credit for Building Product Disclosure and Optimization – Environmental Product Declarations. An EPD also can provide a value-add differentiator in the marketplace to support a concrete producer's sustainable construction initiatives.

## What does BASF's EPD Service include?

Our team of experts will create an EPD document and provide a seamless process to completion. BASF manages the entire process including the detailed life cycle assessment requirements based on the specific concrete product, submission for third-party critical review and registration of the final document through the Program Operator. A final, professionally developed registered EPD will be placed on the Program Operator's website and is available through a unique URL on the producer's website.

## How is BASF uniquely qualified to provide the EPD service?

BASF has a history of innovation and technologically advanced solutions for sustainable construction and has been conducting life-cycle assessments since pioneering the development of the third-party validated Eco-Efficiency Analysis (EEA) in 1996. Based on this technology, BASF has developed a unique EPD Service that is third-party verified for use in creating EPD for concrete and concrete products based on the specific PCR.

## Are EPD developed through BASF critically reviewed and registered?

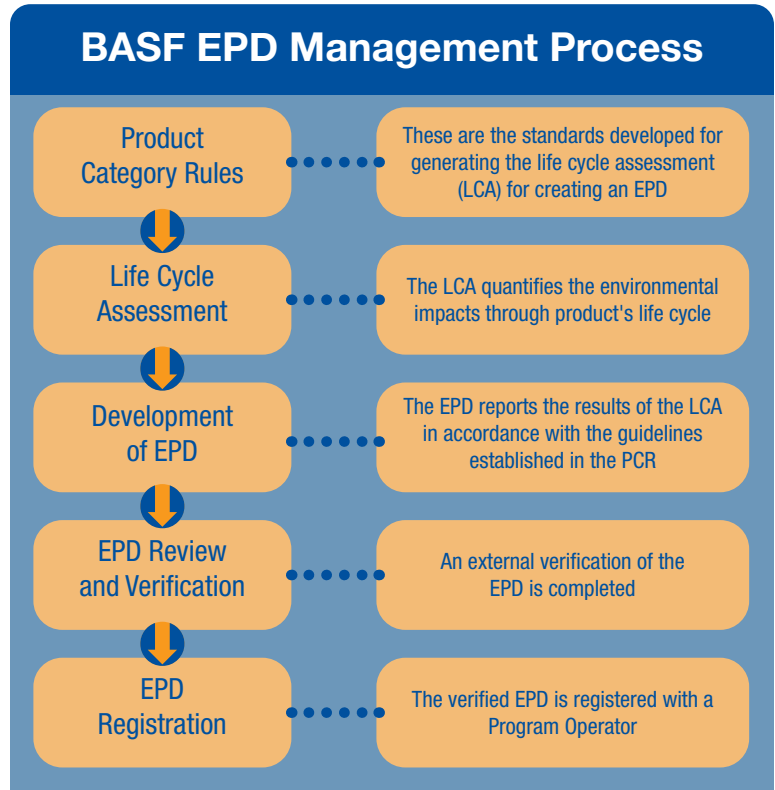
Yes. EPD completed through BASF's EPD service are verified and registered with NSF International as the designated Program Operator.



## Can BASF develop EPD for any concrete product?

BASF is at the forefront of developing this EPD service based on North American PCRs for any concrete mixture or concrete product.

For additional information on the BASF EPD Service or to begin developing EPDs for your concrete mixtures, please contact your BASF sales representative or visit our website at: <http://www.master-builders-solutions.basf.us/>



## More Information

The Master Builders Solutions brand brings all of BASF's expertise together to create chemical solutions for new construction, maintenance, repair and renovation of structures. Master Builders Solutions is built on the experience gained from more than a century in the construction industry.

The know-how and experience of a global community of BASF construction experts form the core of Master Builders Solutions. We combine the right elements from our portfolio to solve your specific construction challenges. We collaborate across areas of expertise and regions and draw on the experience gained from countless construction projects worldwide. We leverage global BASF technologies, as well as our in-depth knowledge of local building needs, to develop innovations that help make you more successful and drive sustainable construction.

The comprehensive portfolio under the Master Builders Solutions brand encompasses concrete admixtures, cement additives, chemical solutions for underground construction, waterproofing solutions, sealants, concrete repair & protection solutions, performance grouts, performance flooring solutions.

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## Contact

**United States**  
23700 Chagrin Boulevard  
Cleveland, Ohio 44122-5544  
Tel: 800 628-9990 ■ Fax: 216 839-8821

**Canada**  
1800 Clark Boulevard  
Brampton, Ontario L6T 4M7  
Tel: 800 387-5862 ■ Fax: 905 792-0651

[www.master-builders-solutions.basf.us](http://www.master-builders-solutions.basf.us)