

MRMCA Environmental Product Declaration (EPD) Information One Sheet for Concrete Plants, Concrete Contractors, Engineers & Architects, and Customers

Environmental Product Declaration (EPD) for Concrete Plants

What is an EPD?

An Environmental Product Declaration (EPD) is a verified and transparent document that provides detailed information about the environmental impact of manufacturing a product cradle-to-gate (throughout its life cycle). For the Maryland concrete industry, obtaining an EPD for concrete plants can be a significant step towards sustainability and environmental stewardship.

What is a PCR?

Product Category Rules or PCRs provide the rules, requirements, and guidelines for developing an EPD for a specific product category. PCRs are used as complements to the general program instructions (GPI), in terms of calculation rules, building scenarios, and EPD contents. They ensure that functionally similar products are assessed in the same way when conducting the LCA and for product comparison. Ex: A PCR should enable different practitioners using the PCR to generate consistent results when assessing products of the same product category.

Step 1: Familiarize with EPD Guidelines

Before beginning the EPD process, concrete plant owners in Maryland should familiarize themselves with the EPD guidelines and standards set forth by relevant authorities. Understanding these requirements ensures accurate and consistent reporting.

Step 2: Gather Data & Information: Life Cycle Inventory (LCI)

Collect essential LCI data related to your concrete plant's operations and processes. This information should cover the entire life cycle of the product, including raw material extraction, transportation, production, and use. (Sourcing, location, and volumes only – nothing financial).

Step 3: Conduct Life Cycle Assessment (LCA)

Perform a comprehensive Life Cycle Assessment (LCA) using the collected data. The LCA evaluates the environmental impact of concrete production, helping to quantify factors like greenhouse gas emissions, energy consumption, and resource depletion. Product category rules (PCR) govern what is and is not included in this LCA.

Step 4: Engage with EPD Program Operators

What is an EPD Program Operator?

The EPD System Program Operator is an independent agency whose role is to conduct, administer, and supervise the development of a type III EPD. Therefore, it is responsible for the development and/or identification of existing product category rules needed for an EPD.

Reach out to recognized EPD Program Operators that comply with international standards (e.g., ISO 14025 and EN 15804). Collaborate with these operators to verify your LCA results and ensure adherence to EPD requirements.

[Climate Earth](#)

[WAP](#)

Step 5: Develop the EPD

Based on the LCA and program operator's guidance, create the EPD document. The EPD should be transparent, accurate, and accessible to stakeholders, providing valuable insights into the environmental performance of your concrete plant.

Step 6: Verify the EPD

Have the developed EPD independently verified by third-party experts or certification bodies to enhance credibility and trustworthiness.

[NRMCA EPD Verification](#)

[ASTM EPD Verification](#)

Step 7: Publish and Register the EPD

Once verified, publish the EPD on relevant platforms and register it with recognized databases. This step helps in promoting the transparency of your concrete plant's environmental performance and enables buyers and other stakeholders to make informed decisions.

Step 8: Continuous Improvement

EPDs are not static documents. Regularly review and update your EPD to reflect improvements in your concrete plant's environmental performance. Continuous enhancement reinforces your commitment to sustainability.

By following these steps, the Maryland concrete industry can obtain EPDs for concrete plants, showcasing its dedication to environmental responsibility and fostering a greener future.

EPD Information for Concrete Contractors in Maryland

As concrete contractors play a crucial role in the construction process, understanding the Environmental Product Declaration (EPD) and its significance can help them make environmentally conscious decisions. Here's how concrete contractors in Maryland can use EPD information to contribute to sustainability:

1. Familiarize with EPD Concepts

Concrete contractors should grasp the concept of EPD and its purpose, which is to communicate the environmental impact of products, such as concrete, throughout their manufacturing. Understanding EPDs empowers contractors to choose environmentally friendly concrete materials for their projects.

2. Source EPD-Certified Concrete

When selecting concrete suppliers or materials, opt for those with third party verified EPDs. These certified products have undergone rigorous assessments, helping contractors make informed choices based on the products' environmental performance.

3. Assess Environmental Impact

With the help of EPDs, contractors can evaluate the environmental impact of different concrete mixes and construction practices. This assessment allows them to select concrete formulations that minimize greenhouse gas emissions, energy consumption, and other ecological impacts.

4. Collaborate with Suppliers

Engage with concrete suppliers and manufacturers who prioritize sustainability and provide EPD information for their products. By working together, contractors and suppliers can promote eco-friendly practices within the construction industry.

5. Educate Project Stakeholders

As advocates of sustainable construction, concrete contractors can educate project owners, architects, and other stakeholders about the importance of using EPD-certified concrete. Awareness of EPDs can lead to more environmentally conscious decisions in the project planning and design phase.

6. Monitor Environmental Performance

During construction, if possible, contractors could try to track the actual environmental impact of the concrete used on-site and compare it to the EPD data. Monitoring the performance helps identify areas for improvement and enhances accountability.

7. Support EPD Initiatives

Concrete contractors can actively support EPD initiatives and advocate for the adoption of EPDs as a standard practice in the construction industry. Encouraging the use of EPDs can foster a more sustainable and eco-friendly approach to concrete construction in Maryland.

By incorporating EPD information into their decision-making processes and practices, concrete contractors in Maryland can contribute to a greener and more environmentally responsible construction industry. Embracing EPDs can lead to positive environmental changes while maintaining the high-quality standards expected in construction projects.

EPD Information for Engineers and Architects in Maryland

Engineers and architects play a pivotal role in shaping the built environment and have the opportunity to make significant contributions to sustainability. Here's how they can leverage Environmental Product Declarations (EPDs) for concrete in Maryland:

1. Specify Concrete Mixes with EPDs

When designing projects, engineers and architects can specify the use of EPD-certified concrete. By incorporating eco-friendly materials from the start, they contribute to reducing the overall environmental impact of the construction process.

Total Lifecycle of the Building:

Model the building and look at the carbon diet and other environmental impacts of the building. Optimizing design may mean a few categories get worse, while the whole building gets better.

2. Collaborate with EPD-Informed Contractors

Engineers and architects can work closely with contractors who are knowledgeable about EPDs and prioritize the use of environmentally friendly concrete. This collaboration ensures that the specified materials are sourced and used appropriately during construction.

3. Use EPD Data for Comparative Analysis

EPDs provide valuable data on the environmental performance of different concrete mixes. Engineers and architects can utilize this data to conduct comparative analyses and select concrete formulations that align with sustainable design objectives.

4. Implement Life Cycle Assessment (LCA)

Engineers can employ Life Cycle Assessment (LCA) methodologies during the design phase to evaluate the environmental impact of the entire project, including concrete materials. This holistic approach aids in identifying opportunities for minimizing ecological footprints.

5. Advocate for EPD Adoption

Engineers and architects can advocate for the adoption of EPDs within the construction industry in Maryland. By raising awareness of EPDs' benefits, they encourage stakeholders to prioritize environmentally responsible choices throughout the supply chain.

6. Encourage Innovation

EPDs can inspire engineers and architects to explore innovative concrete technologies and construction practices that align with sustainability goals. Encouraging such innovation can lead to advancements in green building solutions.

7. Prioritize End-of-Life Considerations

When designing projects, engineers and architects can consider the end-of-life aspects of concrete materials. Choosing concrete with lower environmental impacts throughout its life cycle, including disposal and recycling, can further enhance sustainability efforts.

8. Continue Education and Professional Development

Staying informed about the latest advancements in EPDs, sustainable construction practices, and green building certifications is essential for engineers and architects. Continuous education ensures they remain at the forefront of sustainable design and construction practices.

By incorporating EPD information into their decision-making processes and advocating for its adoption, engineers and architects in Maryland contribute to a more sustainable built environment. Their role in specifying environmentally responsible materials, utilizing life cycle assessment, and promoting innovation can drive positive change in the construction industry, making Maryland a leader in sustainable building practices.

For the Concrete Customer: Why Choose a Company with an EPD in Maryland?

As a customer in Maryland seeking construction services or products, selecting a company that holds an Environmental Product Declaration (EPD) can offer numerous benefits that align with sustainability, transparency, and environmental responsibility:

1. Environmental Commitment

Choosing a company with an EPD demonstrates their commitment to environmental stewardship. An EPD signifies that the company is monitoring its environmental impact and making conscious decisions to prioritize sustainability in their operations.

2. Transparent Environmental Information

Companies with EPDs provide transparent and credible information about the environmental impact of their products or services. This transparency allows customers to make informed choices, promoting a more eco-conscious approach to their construction projects.

3. High-Quality Sustainable Products

EPD-certified companies are likely to offer high-quality sustainable products. The certification ensures that the products have undergone rigorous assessments and adhere to international environmental standards, giving customers confidence in their performance and environmental attributes.

4. Meeting Green Building Requirements

For customers engaged in green building projects or aiming for LEED (Leadership in Energy and Environmental Design) certification, using products and services from companies with EPDs can help meet sustainability requirements and earn valuable green building credits.

5. Contributing to a Greener Maryland

By supporting companies with EPDs, customers actively contribute to promoting sustainable practices within Maryland's construction industry. This collective effort leads to a greener and more environmentally responsible built environment for the state.

6. Complying with Government Initiatives

With the Buy Clean Maryland Act signed by the Governor in April 2023, local Governments and municipalities in Maryland might encourage or mandate the use of eco-friendly products and services. Choosing a company with an EPD ensures that your construction project aligns with local sustainability initiatives and regulations.

7. Accountability and Credibility

Companies with EPDs are held accountable for their environmental claims. The EPD is independently verified, offering credibility and assuring customers that the company's environmental impact data is accurate and reliable.

8. Long-Term Value

Opting for products and services from companies with EPDs can lead to long-term value for customers. Environmentally responsible choices often result in reduced operational costs, improved efficiency, and increased durability of the constructed facilities.

9. Sustainable Partnerships

By engaging with companies that prioritize EPDs, customers foster sustainable partnerships. These partnerships promote a shared vision of sustainability and encourage further advancements in eco-friendly construction practices.

Choosing a company with an EPD in Maryland goes beyond just a business decision – it reflects a commitment to sustainability and environmental consciousness. Such choices can create a positive ripple effect, inspiring more companies to adopt green practices and contributing to a cleaner, greener future for Maryland and beyond.