

Cargill Anova[®] asphalt additives support industry goals of zero carbon emissions through verified EPDs

Minneapolis, MN - Asphalt Solutions is proud to announce the completion of a verified Life Cycle Assessment (LCA) and Environmental Product Declaration (EPD) for Anova[®] asphalt additives. The results from the EPDs for Anova[®] rejuvenator and Anova[®] warm mix additive can be used to calculate how these asphalt additives may help reduce the environmental impacts of asphalt mixtures by increasing the use of recycled asphalt pavement (RAP) and lowering the temperature of your asphalt mix.

This data further supports our product offering. Now you can maximize RAP, minimize energy use and understand the carbon contribution of our Anova products. These studies provide validated product-specific carbon footprint values that can be included in the carbon emissions calculators required for specific asphalt projects. An understanding of the carbon impacts of asphalt additives helps achieve global Climate Commitments and reduce the greenhouse gas (GHG) emissions in the road construction industry.

Cargill Anova asphalt additives provide benefits in reducing carbon emissions and can help contribute towards net-zero commitments related to asphalt paving, for example:

- US: Achieve net zero carbon emissions during asphalt production and construction by 2050.
- UK: At least 50% of all asphalt used on the strategic road network will be warm mix asphalt by 2025 and 80% by 2030.
- Germany: the MAK*-Value of 1.5 mg/m³ will come into effect on January 1, 2025, resulting also into the requirement of warm mix asphalt usage.

Cargill has partnered with the National Asphalt Pavement Association (NAPA) to incorporate this new data into the Emerald Eco-Label tool, which provides contractors the ability to create their own mix- and plant-specific EPDs to communicate environmental impact data. *“NAPA worked with Cargill to incorporate the upstream data into our Emerald Eco-Label tool,”* said Joseph Shacat, NAPA’s Director of Sustainable Pavements. *“The process is relatively simple, starting with a completed, verified EPD for the additives. We’re always advocating for more transparency around upstream materials, and we applaud this step Cargill has taken. We encourage other suppliers to produce EPDs and incorporate them into the tool.”* Go here to try it out: <https://asphaltpd.org/>.

The Anova rejuvenator and warm mix additive are innovative, bio-based, non-toxic and non-hazardous asphalt additives.

- With **Anova[®] rejuvenator**, the recycled asphalt pavement (RAP) in your asphalt mix can be increased by up to 100%. For example, if the total US asphalt industry increased RAP from 20% to 40%, this could result in a greenhouse gas emissions reduction of up to 2 million MT CO₂-eq, avoidance of up to 18 million MT of waste sent to landfill, and up to \$3 billion cost reduction.
- **Anova[®] warm mix additive** allows you to use production temperatures up to 80°F lower than conventional hot mix asphalt (HMA). In 2021, the use of WMA technologies to produce asphalt mixtures at reduced temperatures, reduced greenhouse gas emissions in by 0.08 million metric tons of CO₂-eq, which is equivalent to the annual emissions of 17,000 passenger vehicles.

Cargill’s Anova asphalt additives and manufacturing processes were analyzed by Ecochain using a cradle-to-gate life cycle assessment (LCA) in conformance with ISO 14040:2006. Ecochain then used the LCAs to generate an Environmental Product Declaration (EPD) which transparently reports objective, comparable, third-party verified data about products and services’ environmental performance from a life cycle perspective. The Anova EPDs conform with ISO

14025:2006 and ISO 21930:2017, and include reporting of biogenic carbon content. The documents can be requested [here](#).

The National Asphalt Pavement Association in the US has mentioned that “Road owners, agencies, and contractors need to share quantifiable metrics of sustainability and environmental impact with their stakeholders.” The same has been said by the European Asphalt Pavement Association: “An increasing demand from road owners, operators and users for sustainability and environmental accountability as included in the Construction Products Regulations has raised the need for producers to make EPDs available.” With an EPD, the information needed to understand the potential environmental impact of a specific product is presented in a clear report outlining the results in a consistent format, giving stakeholders confidence in the data.

“Publishing the EPD for our products is an essential step in demonstrating the sustainability impact of our products. We’re committed to supporting the industry with high-performance, more sustainable solutions.” said Justin Black, Global Category Leader for Cargill Asphalt Solutions.

In 2022, NAPA launched The Road Forward, an industry wide challenge to pave the way toward innovation and implementation of net zero carbon emissions solutions. Cargill has been a partner from the start. *“We are honored that Cargill has partnered with us on The Road Forward since the very beginning, as an inaugural partner,”* said Richard Willis, PhD, NAPA’s Vice President for Engineering, Research, and Technology. *“This demonstrates their commitment to the industry and driving toward more sustainable pavements. NAPA’s The Road Forward initiative challenges the asphalt pavement community to achieve net zero carbon emissions during asphalt production and construction by 2050.”*

ANOVA® REJUVENATOR

Anova rejuvenator reverses the impact of aging on pavement. It helps to build and maintain better roads with up to 100% usage of recycled asphalt pavement (RAP) while still meeting performance specifications and helping to meet sustainability goals.

ANOVA® WARM MIX ADDITIVE

With Cargill’s non-hazardous Anova warm mix additive, crews can reliably achieve density and improve workability at lower temperatures while reducing emissions. Anova warm mix additive is bio-based, can eliminate the needs for anti-stripping agents and improves the moisture resistance of the asphalt binder.

www.cargill.com/asphaltsolutions

To request the EPD's:

anova-asphalt@cargill.com