ELASTOSPRAY® BMB: Sustainability Overview

What is ELASTOSPRAY® BMB Isocyanate?

ELASTOSPRAY® BMB Isocyanate is BASF's biomass balance A-component available for use with all BASF spray polyurethane foam (SPF) systems. It delivers the same processing, performance, and code compliance as our conventional isocyanate – but with renewable feedstocks used at the start of the value chain and a lower product carbon footprint, independently validated through Life Cycle Analysis (LCA) and Environmental Product Declarations (EPDs) for the BASF foam systems containing this specialty isocyanate.

It serves as the isocyanate backbone for low-embodied-carbon SPF systems like WALLTITE® RSB and the ENERTITE® Series with ELASTOSPRAY® BMB Isocyanate, making it a key enabler for BASF's Future-Oriented Advanced Materials (F.O.A.M.) low-carbon portfolio.

Sustainability Story at a Glance

Renewable feedstocks via Biomass Balance (BMB): A portion of fossil feedstock at BASF's production site is replaced with renewable alternatives (e.g. sustainably certified biomass generated from post-consumer waste), and then attributed to ELASTOSPRAY® BMB Isocyanate using a certified mass balance approach.

Third-party certified chain of custody: Renewable feedstock sourcing and attribution are verified by REDcert, under their REDcert² certification scheme for sustainable material usage in the chemical industry, ensuring traceability and credibility of the biomass balance model.

Independently confirmed BMB methodology: BASF's Biomass Balance calculation methodology is confirmed by TÜV Rheinland, verifying that reductions in product carbon footprint are calculated according to ISO 14067 and the Together for Sustainability (TfS) Product Carbon Footprint Guideline.

EPD-backed transparency: ENERTITE® Series + ELASTOSPRAY® BMB Isocyanate and WALLTITE® RSB + ELASTOSPRAY® BMB Isocyanate have product-specific, cradle-to-grave EPDs verified by NSF International in accordance with ISO 14040-44, ISO 14025 and ISO 21930, giving specifiers a comprehensive overview of environmental impacts.

Lower embodied carbon vs conventional SPF systems: As a drop-in replacement for our conventional fossil-based A-component, ELASTOSPRAY® BMB isocyanate enables significant reductions in product carbon footprint (PCF) across the entire BASF spray foam system portfolio (WALLTITE®, ENERTITE® and SKYTITE®).

No compromise on performance or code compliance: BASF spray foam systems using ELASTOSPRAY® BMB Isocyanate retain the same technical performance and code approvals as their conventional counterparts. They utilize the same processing, equipment, storage and handling as the current spray foam formulas.

North American production & supply security: BASF is investing in isocyanate capacity at its North American sites to offer domestically produced biomass balance isocyanates and improve supply reliability and lead times.

How the Biomass Balance (BMB) Approach Works

Instead of making “bio” and “fossil” products on separate production lines, BASF feeds renewable raw materials feedstocks (such as renewable natural gas generated from landfill waste) into existing large-scale production assets alongside fossil feedstock. Using a certified mass balance model, a defined share of those renewable inputs is then attributed to quantities of specific products like ELASTOSPRAY® BMB Isocyanate.

- **Verified renewable share:** The share of renewable feedstock attributed to BMB products is audited and certified by REDcert, so customers can document the sustainability benefit in a credible way.
- **Same quality & properties:** BMB isocyanates are chemically identical to their conventional equivalents and processed exactly the same way in the field.
- **Lower Environmental Impacts:** Production methods of this kind save fossil resources and reduce CO_2 emissions at the same time. Through this process, the product carbon footprint (PCF) of the spray foam is lowered, by reducing greenhouse gas emissions.
- **Significant emission reductions**: BASF spray foam systems (WALLTITE®, ENERTITE® and SKYTITE®) utilizing ELASTOSPRAY® BMB isocyanate can achieve reduced PCF from 21 to 29% (lb. CO_2 eq./lb.) depending on formulation, when compared to our conventional, fossil based spray foam systems.

BMB & Site Certifications

Biomass balance chain-of-custody: Renewable feedstocks and their attribution to BMB products are certified under REDcert^2. Through the certification process, these renewable materials show connectivity and are traceable in the upstream production at the approved plant.

BMB methodology certification: TÜV Rheinland confirms that the BASF product carbon footprint (PCF) calculation and associated PCF reduction due to the use of biomass as feedstock for mass balance products follows conventional LCA methodological approaches as described in ISO 14067:2018 and the TfS PCF Guideline.

ISO-based management systems: BASF production sites (including key isocyanate and polyurethane locations) operate under ISO-certified quality and environmental management systems (e.g., ISO 9001, ISO 14001), as documented in BASF’s corporate sustainability reporting.

Spray Foam System - Code Compliance & Credentials

While ELASTOSPRAY® BMB Isocyanate itself is just one of the two components used in the BASF chemistry, the BASF spray foam systems created when utilizing this are backed by:

- **Intertek CCRR-0374** – Code Compliance Research Report for BASF closed-cell WALLTITE® foam systems (ccSPF
- **Intertek CCRR-1032** – Code Compliance Research Report for BASF open-cell ENERTITE® foam systems (ocSPF)
- **International Code Council ESR-2642** for WALLTITE® ccSPF insulations
- **International Code Council ESR 3102** for ENERTITE® ocSPF insulations
- **International Code Council ESR-2298** for SKYTITE® Series Roofing Systems
- **UL Solutions Evaluation Report ULC ER41037** for BASF Canada Inc. WALLTITE v.5 ccSPF
- **UL Solutions Evaluation Report ULC ER41037-05** for BASF Canada Inc. ENERTITE G ocSPF
- **Additional credentials and certifications:** GREENGUARD® GOLD and other UL Solutions Environmental Claims Validations, NFPA 285 Fire Rated Assemblies, UL 263 Hourly Fire Resistance Rated Assemblies and more. All these along with EPDs available on the BASF Resource Centers on our NA websites.

Scan or click for more information on the BMB methodology and EPD results.

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