Life Cycle Assessment (LCA) performed on ELIX E-LOOP grades

Solution

Promote the development of recycled and bio-based products using the Life Cycle Assessment (LCA) methodology.

Description

Chemical industry companies are making great efforts to increase the sustainability of their processes and reduce their carbon footprint. To monitor this, LCA methodology is an objective methodology that shows with transparency the environmental impacts associated with a product or a system during its entire life cycle. ELIX has gone a step further and not only carried out carbon footprint calculations but the entire LCA analysis of their products pursuant to ISO 14040 and ISO 14044.

Of all the environmental impacts evaluated in the LCA, ELIX has focused on carbon footprint, water footprint and fossil resources scarcity impacts, which match what the chemical industry considers to be the most relevant indicators.

Objectives

- Apply Life Cycle Assessment methodology to show with transparency the environmental impacts associated with ELIX products.
- Identify improvement areas at the ELIX production plant to reduce environmental impacts.
- Analyse the influence of the use of more sustainable raw materials (bio-origin, mechanically recycled and chemically recycled) over the different ABS impact categories to optimise the selection of feedstocks.
- Provide our customers with the carbon footprint of specific grades and other relevant environmental impact categories to find the best option based on their application and targets.

Features

- LCA of ELIX ABS products calculated pursuant to ISO 14040 and ISO 14044 (Cradle-to-Gate analysis), including direct emissions (Scope 1) and indirect emissions (Scope 2 and Scope 3).
- Methodology used for carbon footprint category: IPCC 2021 GWP 2021.
- Methodology used for other impact categories: ReCiPe 2016 Midpoint (H).
- Data updated every year (data for the 2021 activity already available).
- Carbon footprint calculations available for all the different ELIX virgin and E-LOOP products.

Benefits

- Implementation of 100% of the electricity consumption from alternative sources to fossil fuels in the ELIX production plant.
- Possibility of offering a more sustainable portfolio (including bio-based, chemically recycled and mechanically recycled feedstocks) with significant carbon footprint reduction (cradle-to-gate approach) and other relevant environmental impact categories.
- Possibility of adapting the calculations to customers´ procedures (including/excluding biogenic carbon uptake, considering end of life scenarios, etc.).

Learn more about ELIX LCA studies https://www.elix-polymers.com/portfolio-solutions

For enquires regarding LCA and carbon footprint calculations, please contact: **transferknowledge@elix-polymers.com**