

Life cycle assessment dataset

“US: Ingeo 2010 biopolymer production Blair”

Critical Review

Client:
NatureWorks LLC

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Summary

The independent external critical review was prepared for NatureWorks LLC concerning the LCA dataset „US: Ingeo 2010 biopolymer production Blair“. Reporting and interpretation of the dataset are not in the scope of this critical review.

The dataset is in conformity with the standards ISO 14040 and 14044. The selected methods are in accordance with the state of the art in science and technology. The used data, including primary data and background data, are consistent and of high quality.

Critical Review

The topic of the critical review is the LCA dataset „ US: Ingeo 2010 biopolymer production Blair“, which was established in February 2014 by NatureWorks LLC. The dataset shall allow the generation of LCIA results that allow the comparison of the Ingeo biopolymer to conventional polymer datasets of PlasticsEurope. A critical review according to ISO 14044 is performed by an independent and external expert.

According to ISO 14044 the critical review checked that

- the methods used are consistent with the standards ISO 14040 and 14044,
- the methods used are scientifically and technically valid and
- the data used are appropriate and reasonable in relation to the goal and scope of the study

Reporting and interpretation of the dataset are not in the scope of this critical review.

The dataset is in conformity with the standards ISO 14040 and 14044.

The used methods are in accordance with the state of the art in science and technology. The models of the production systems are understandable and documented well. Data gaps and their closure, calculations and data aggregations are in accordance with the generally accepted approaches and are documented well.

No allocation is used in the foreground system (farming of corn to Ingeo polymer). All wastes are modelled to the end of waste status, so that only elementary flows cross the system boundary. For valuable products resulting from waste processing credits are given (system expansion).

The used data basis, including primary data and background data, is detailed and consistent. The primary data collected through measurements is comprehensive and plausible. The data quality is very good/good and is extensively reviewed concerning origin, completeness and consistency. The used data is suitable and in accordance with the goal of the study.

The LCIA results of all regarded impact categories are plausible.

Leinfelden-Echterdingen, March 13, 2014



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