Review report Alkyd resin (thixotropic polyurethane), Production mix, at plant, Technology mix, 77% in low aromatic white spirit

Administrative Information

Data set name: Alkyd resin (thixotropic polyurethane), Production mix, at plant, Technology mix, 77% in low aromatic white spirit

UUID (Universal Unique IDentifier): fb5376e6-4649-4396-8165-b2d22e0bad2e

Data set provider: CEPE, The European Council of the Paint, Printing ink, and Artists' Colours Industry (www.cepe.org)

Reviewer: Dr. Andreas Ciroth, GreenDelta, ciroth@greendelta.com; Franziska Möller, GreenDelta, moeller@greendelta.com

Review type applied: Independent internal review

Date of review completion: 7/20/2017

EF compliance: Reviewed against tender specifications from service contract for provision of "chemicals for paints" process-based product environmental footprint-compliant LCI datasets

Nomenclature

Nomenclature is compliant to the ILCD flow list from August 2016 which is supposed to be used for the provision of the datasets ("ILCD-ref-ElemFlows-August-2016.xlsx"), as integrated in the ILCD validation tool, version 1.3.4; two flows ("Lake water, to turbine" and "River water to turbine") were identified to not be compliant, but these are part of a document provided by the EC, stating potential issues that do "not prevent the use of the flows and methods released" (Name of document: "EF package_validation issues 04042017").

Documentation

Detailed documentation within dataset; documentation is ILCD compliant, as tested with ILCD Validation Tool, version 1.3.4.

Methodological appropriateness and consistency

Completeness

All 15 EF impact categories can be assessed; it is documented in the meta information that all relevant flows are quantified.

Water use

Water flows are regionalized; separate flows are used for water withdrawal, water release and water evaporation; a few water flows are not regionalized, but as these are taken from the ILCD flow list we do not consider this an issue.

Cut-off

It is documented that no cut-off was applied for the LCI modeling.

Handling multi-functional processes

According to the documentation, system expansion was applied in the foreground system when multi-output processes occurred, and in the background system allocation using the market value was applied; this is compliant to the technical specifications.

Direct land use change

Emissions from direct land use change (LUC) are allocated to good/service for 20 years after the LUC occurs, according to documentation.

Carbon storage and delayed emissions

Credits associated to carbon storage and delayed emissions are documented as not to be included.

Emissions off-setting

Emissions off-setting is documented as "not included".

Capital goods (including infrastructures) and their End of life

Capital goods (including infrastructure) and their End-of-Life are included in the dataset, according to documentation.

System boundaries

System boundaries are documented as cradle-to-gate.

Time period

Time discounting is reported as not included.

Fossil and biogenic carbon emissions and removals

Fossil and non-fossil carbon emissions and removals are considered separately, and the emissions of biogenic methane are considered. Information on the "biogenic carbon content (at factory gate)" was not present at the time of the review, but will be added later to the dataset, according to the dataset creator.

Data Quality

The following data quality indicators were assessed based on the 'quality level and rating for the data quality criteria' from the tender specifications. The overall DQR of the dataset, as well as each single indicator, is not higher than 3.0, therefore the dataset is compliant with the tender specifications.

DQR - Data Quality Rating of the dataset: 2.0

TeR - Technological Representativeness: 2.0 (Technology mix/Production mix)

GR - Geographical Representativeness: 2.0 (European dataset)

TiR - Time-related Representativeness: 2.0 (Annual average; valid for 2012, and until 2020)

P - Precision/uncertainty: 2.0 (No primary data used; calculated values; adapted datasets from databases)

EoL – Implementation of End of Life Formula: 2.0 (It is stated that the EoL formula (version in Annex V of the Commission Recommendation of 9 April 2013) is implemented in foreground at level-1 aggregated processes)