Report template Alkyd resin (short oil); technology mix; production mix, at plant; 77% in white spirit

Administrative Information

Data set name: Alkyd resin (short oil); technology mix; production mix, at plant; 77% in white spirit

UUID (Universal Unique IDentifier): b3930178-368d-4f49-92a0-9f5bf4d973c9

Data set provider: CEPE, The European Council of the Paint, Printing ink, and Artists' Colours Industry

Reviewer: Max Sonnen, Ecomatters B.V., max.sonnen@ecomatters.nl

Review type applied: Independent internal review

Date of review completion: 7/18/2017

EF compliance: Technical requirements of the service contract for provision of "Chemicals for paints" process based PEF-compliant LCI.

Nomenclature

All the elementary flows are modelled consistently with the most updated ILCD list of elementary flows, as evaluated with the ILCD format validation tool. The elementary flows therefore comply with the requirements for "Classification / categorisation of elementary flows" and "Naming of Elementary flows".

The product flows comply with the requirements for "Hierarchical classification of Product flows, Waste flows and Processes". The product flows comply with the requirements for "Structuring flow names" (“Base name”; “Treatment, standards, routes”; “Mix type and location type”;“Quantitative flow properties”). The product flows comply with the requirements for "Naming of Product flows and Waste flows" (Named using technical names, being as precise as possible, with the different types of information being documented into the four names fields as defined and illustrated for the ILCD reference format).

The process complies with the requirements for "Naming of processes" (The name of process data sets with exactly one "reference flow" should be identical to the name of that reference flow) .

Documentation

All the fields to be filled in order to have an appropriately "ILCD documentation compliant" dataset according to the document "Documentation of LCA data sets. Version 1.1Beta, 2011" (entry "C") are complete. All the fields are correctly / appropriately filled and the extent of the

information provided is correct. The dataset has a valid ILCD format schema and ILCD format, as evaluated with the ILCD format validation tool.

Methodological appropriateness and consistency

Completeness

All 15 impact categories are covered in the dataset. All relevant flows are quantified for all impact categories. The 90% minimum of each impact to be covered in order to consider a dataset EF-compliant (environmental relevance) is satisfied. The reviewer has checked the LCI and compared to the elementary flows that contribute most to the JRC-provided normalisation data of the respective impact category. No "Estradiol" and "Folpet" emissions are included (Ecotox). These are considered to be product-specific and therefore not necessarily present in the LCI of chemicals for paints. Both "Estradiol" and "Folpet" have a small contribution to the impact category (5%). No "Phosphorus, total" and "Nitrogen, total (excluding N2)" are included (Eutrophication). The impact of these flows is covered by other flows containing nitrogen and Phosphorus, which are included in the LCI.

Water use

Water use is modelled at country level using separate flows for water withdrawal, water release and water evaporation.

Cut-off

The cut-off criteria has been checked based on the documentation provided by the data providers. The dataset is as complete as the knowledge of the data providers and data sources allow. The cut-off rule threshold of 95% is satisfied.

Handling multi-functional processes

The PEF multi- functionality decision hierarchy is applied for resolving multi-functionality problems.

Direct land use change

Direct land use change is accounted for on the basis of a 20 year time period. Direct land use change is implemented in the calculation of Climate change and Land Use.

Carbon storage and delayed emissions

No credits are associated with temporary (carbon) storage or delayed emissions.

Emissions off-setting

Emissions off-sets are not included.

Capital goods (including infrastructures) and their End of life

Capital goods including infrastructures are included in the models.

System boundaries

System boundaries include all processes linked to the product supply chain.

Time period

No time discounting is applied. Emissions and removals are modelled as if released or removed at the beginning of the assessment method.

Fossil and biogenic carbon emissions and removals

All GHG emissions from fossil fuels are modelled consistently with the most updated ILCD list of elementary flows. Carbon emissions and uptakes are modelled consistently with the most updated ILCD list of elementary flows.

Biogenic uptake and emissions are modelled separately. Carbon exchanges from deforestation, road construction or other soil activities are included. The CO2 uptake by a native forest is excluded and not modelled. The modelling guidelines of PAS 2050:2011 and the supplementary document PAS2050-1:2012 for horticultural products are followed. Soil carbon accumulation (uptake) via improved agricultural management is excluded from the model, but it is not reported as meta-data.

Data Quality

The quantification of parameters TeR, GR, TiR, and P is based on the results of a contribution analysis carried out on the dataset. The TeR, GR, TiR, and P values for the dataset are assigned as the weighted average of the corresponding values for the unit processes contributing cumulatively to the 100% of the total environmental impact based on PEF results.

The overall DQR for the dataset is equal or lower than 3,0 and each single quality criteria of the five used in the DQR formula is equal or lower than 3,0.

DQR - Data Quality Rating of the dataset: 2,6

TeR - Technological Representativeness: 3

GR - Geographical Representativeness: 2,3

TiR - Time-related Representativeness: 2,6

P - Precision/uncertainty: 3

EoL – Implementation of End of Life Formula: 2