

JRC Dataset

Aluminium sheet; primary production; production mix, at plant; aluminium semi-finished sheet product, including primary production, transformation and recycling (Location: RER)

Description:

The environmental data have been collected through an extensive environmental survey, organised among the European aluminium industry, focussing on the year 2005 and covering EU-27 countries as well as EFTA countries (Norway, Iceland, and Switzerland). From this survey, European average values, i.e. foreground data, have been calculated for the direct inputs and outputs of the various aluminium processes. Using the GaBi software system, the foreground data have been combined within LCI models integrating background LCI data on energy supply systems, ancillary processes and materials. From these models, generic European LCI data sets have been developed respectively for the production of primary and recycled aluminium ingots and for the transformation of aluminium ingots into semi-finished products, i.e. sheet, foil and extruded products. For the development of the LCI data related to primary aluminium production, a specific model for the electricity production has been developed. Alloying elements have not been considered in these data sets and have been substituted by pure aluminium. The methodology and the various environmental and LCI data have been published in an environmental profile report which is available for download from the website of the European Aluminium Association (www.eaa.net). Professor Walter Klöpffer, as an independent expert, has critically reviewed the entire LCI project including the data collection, the data consolidation, the development of the various LCI models and the calculation of the associated LCI data sets. This critical review, which is attached at the end of the report, has confirmed that the LCI data sets were developed in accordance with ISO 14040 and 14044 standards. The LCI data sets related to primary production, recycling and sheet have been combined together according to the flow diagram reported below in order to generate the generic LCI data set for semi-finished aluminium sheet products. Synonyms: Aluminium coil, aluminium strip Technical Purpose: Aluminium sheets are used in many sectors like packaging (can, containers), building (roofing, facade panels), transport (closures, BIW), engineering or for specific applications like lithographic sheets. Aluminium sheets can be formed and joined with other components in complex applications. Aluminium sheets can be anodised or/and coated. Typical thickness of aluminium sheets is between 0,2 and 4 mm. Aluminium foil (thickness < 200 µm) is not considered in this generic data set. Geographical Representation: RER

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Materials production, Metals and semimetals

Related resources:

Data access

Full ELCD Database

Landing Page to download the full ELCD Database.

<http://eplca.jrc.ec.europa.eu/ELCD3/>

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