

Life Cycle Inventory Database for Steel Industry Products Policy Statement

Life cycle assessment (LCA) is one of the tools increasingly being used to consider the environmental issues associated with the production, use, disposal, and recycling of products, including the materials from which they are made. An LCA is generally recognised to consist of four phases: the establishment of the goals and scope of the assessment; the drawing up of an inventory of the input materials and energy, and the output emissions for each stage of the product life cycle; an assessment of the impact on the environment; and the identification of actions for improvement.

The techniques of life cycle assessment are continually being assessed and developed. The results are often sensitive to the exact assumptions made. Environmental priorities and issues change in different societies, and therefore the analysis is specific in both location and time. There is a danger in reducing complex issues to simplistic and partial analysis.

LCA can be used to identify priorities for improvements in process operations and product design and development, working closely with customers. The present state of the art and the sensitivity of results to subjective assumptions demand extreme caution when using LCA to compare the impact of alternative materials on the environment.

The steel industry is committed to the concept of sustainable development. This is illustrated by the worldsteel Sustainable Development Policy, which states that the highest standards of environmental care require that the principle of sustainable development is incorporated into all aspects of the management of our industry. It is therefore essential that LCA studies should be correctly placed in the broader context of sustainable development.

To avoid the value of LCA being undermined, the steel industry has been very careful in its use – both in the undertaking of studies and in the publication and interpretation of data and results. A set of practical guidelines has been drawn up and the worldsteel Board of Directors recommends it to all those undertaking or using LCA for the purposes outlined above.

- Maintain the highest standards in both the undertaking of LCA studies and their disclosure to both internal and external audiences.
- Seek to place LCA within its broader context of sustainable development (see worldsteel Sustainable Development Policy), recognising that this requires that due weight must also be given to the impact on human health and safety, welfare, bio-diversity, the impact on individual eco-systems, the length of a product's life and its recyclability, and the sustainable use of natural resources.
- Support efforts to develop a consistent, rigorous and transparent methodology for LCA to enable society to make informed choices on the environmental impact of products and processes.
- Support the collection and dissemination of data on the use and reuse of materials, and the environmental effects resulting from their production.
- Publish data clearly in a form that allows the user to clearly identify the key assumptions made and the sensitivity to those assumptions.
- Avoid the selective disclosure of results or the use of data out of its original context.
- Avoid the mixing of product comparisons based on actual current practice with those based on optimal performance at some future date.
- Avoid claims of superior impact on the environment where the differences between materials are likely to be within the margin of error of the key assumptions.
- Support the development of standards for LCA, including the work of the International Organization for Standardization (ISO).

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