LIGAS DE ALUMINIO S.A.

Address: Av. Dr. José Patrus de Sousa, 1.000, Distrito Industrial, Pirapora/MG

The verification of the Carbon Footprint of Product metallic silicon for the year 2023, was carried out in accordance with the requirements of the standard:

ISO 14067:2018

For the activity of: metallic silicon

Verifier:: Luiz Gustavo Teixeira

Authorized by:
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SGS has been contracted by LIGAS DE ALUMÍNIO S.A. (here in referred to as "CLIENT"), located at Av. Dr. José Patrus de Sousa, 1.000, Distrito Industrial, Pirapora/MG, to verify the Carbon Footprint of Product metallic silicon in accordance with the standard:

ISO 14067:2018

According to the report "Estudo de Pegada de Carbono Parcial (CFP-Parcial)" prepared by ECONOM SOLUÇÕES covering the life cycle analysis (LCA) parcial for the Carbon Footprint of Product metallic silicon in the year 2023.

Functions and responsibilities

The client is responsible for the information system and calculations of the life cycle analysis of the product metallic silicon, development and maintenance of the records and procedures of the report “Estudo de Pegada de Carbono Parcial (CFP-Parcial)”

It is SGS's responsibility to express an independent Carbon Footprint verification opinion based on the “Estudo de Pegada de Carbono Parcial (CFP-Parcial)” report.

SGS conducted a Third Party verification on the report “Estudo de Pegada de Carbono Parcial (CFP-Parcial)” of the life cycle analysis of the product metallic silicon provided in accordance with the principles of **ISO 14044:2009 and ISO 14067:2018** in the period 2023. The verification was based on the verification scope, objectives and criteria as agreed between Client and SGS on 01/11/24.

Scope Verified

- Evaluated product system: production of ferroalloys.
- System Boundaries: Cradle to Gate.
- The partial study considered greenhouse gas emissions related to the raw material extraction processes (the cradle) and ends when the product leaves the factory (the gate), defined as partial because it only covers GHG emissions from the selected traceable phases of the product's life cycle.
- Functional unit: 1 t of product.
- Geographical location/boundaries of activities: The production activities Av. Dr. José Patrus de Sousa, 1.000, Distrito Industrial, Pirapora/MG
- Physical infrastructure: administrative areas, reception of minerals, coal and firewood, smelting furnace, storage and loading areas for metallic silicon, effluent treatment areas
  - Sources, sinks and/or reservoirs included: charcoal production activities, transportation of raw materials, smelting of materials and combustion of fuels.

Conclusion

SGS do Brasil, on the basis of ISO 14.067:2018 and ISO 14.044:2009, declares that the product life cycle assessment based on the Carbon Footprint of Product: metallic silicon produced by LIGAS DE ALUMINIO S.A., reference year 2023, is in conformity:

- the methods used to carry out the LCA are consistent with this International Standard,
- the methods used to carry out the LCA are scientifically and technically valid,
- the data used are adequate and reasonable in relation to the objective of the study,
- the interpretations reflect the limitations identified and the purpose of the study, and
- the study report is transparent and consistent."

Results

The life cycle analysis using the Product Carbon Footprint approach: metallic silicon, was verified by a third party, SGS, as shown in the table below:

Table 1: Results of the Product Carbon Footprint life cycle analysis:

Product	Indicator for climate change impact category GWP 100 [tCO2eq/t]
Metallic Silicon	4.623

SGS's approach is based on understanding the risks associated with reporting life cycle analysis. Our analysis included the evaluation of relevant evidence, based on testing, related to the quantities and information of the data reported by the organization.

We carried out our verification work to obtain the information, explanations and evidence considered necessary to obtain the standard-compliant assessment related to the Product Life Cycle Analysis data for the period 2023.

In the opinion of SGS the Product Carbon Footprint Report presented is:

- materially correct and is a fair representation of the data, and
- prepared in accordance with ISO 14.067:2018 and ISO 14.044:2009.