

Product Carbon Footprint Verification Opinion

**The Inventory of Product Carbon Footprint of
Spunlace Nonwoven**

which is calculated by

NAN LIU ENTERPRISE CO., LTD.

No.699 Silin Road, Yanchao District,
Kaohsiung 824, Taiwan R.O.C.

Based on life cycle assessment verified in accordance with ISO 14064-3:2019 as
meeting the requirements of

ISO 14067:2018

Opinion Type: Modified

Basis of Assessment

Cradle-to-Gate

Authorized by



Stephen Pao

Business Assurance Director

Version 1

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TGP57-15-16 2501

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Validation and Verification
VB002

Product Name	Spunlace Nonwoven			
Declared Unit	kg			
Functional Unit	—			
Life cycle GHG emissions				
Declared Unit emissions (Unit: kilograms of CO ₂ e)				Functional Unit emissions (Unit: kilograms of CO ₂ e)
Life Cycle Stage	Material	Manufacture	Total	
Spunlace Nonwoven RTA037 1090*4500	6.378	1.531	7.91	—

SGS has been commissioned by NAN LIU ENTERPRSE COM (hereinafter referred to as "NAN LIU GROUP"), No.699 Silin Road, Yanchao District, Kaohsiung 824, Taiwan R.O.C. to conduct the life cycle Greenhouse Gas (hereinafter referred to as "GHG") emissions verification of Spunlace Nonwoven in accordance with ISO 14064-3:2019 against the requirements of

ISO 14067:2018

Roles and responsibilities

- The management of NAN LIU GROUP is responsible for the organization's GHG information system, the development and maintenance of records and reporting procedures in accordance with that system, including the calculation and determination of the life cycle GHG emissions for product information and the reported life cycle GHG emissions of the product.
- Contract Date: The verification was based on the verification scope, objectives and criteria as agreed between NAN LIU GROUP and SGS on 25 December 2024.
- Verification Standard: ISO 14067:2018
Greenhouse gases- Carbon footprint of products- Requirements and guidelines for quantification
- Verification Period: 05 June 2025 to 15 September 2025.

Scope

- GHG information for the following production period was verified : 01 January 2023 to 31 December 2023.
- Title or description of activities : Product carbon footprint verification of the Cradle-to-Gate life cycle GHG emissions manufactured by NAN LIU GROUP:
 - Spunlace Nonwoven RTA037 1090*4500
- Manufacturing location :
 - HQ : No.699 Silin Road, Yanchao District, Kaohsiung, Taiwan.R.O.C
- Product Category Rule : Nil.
- Functional unit : NA
- Declared unit : kg
- System boundary : Covers a Cradle-to-Gate assessment of the full life cycle emissions; the system boundary was clearly defined in accordance with ISO 14067:2018. All GHG's enlisted on ISO 14067:2018.
- Data resources : The primary data collection is from manufacturing and operational control phases. The secondary data collection is from Carbon Footprint Information Platform, 、Ecoinvent 3 、EF Database 3.1.
- Life cycle assessment tool and index :

- Life cycle emissions are calculated by Excel and SimaPro 10.2.0.0
- IPCC 2021 AR6 GWP values are applied in this inventory.
- Level of assurance: In accordance with verification criteria and the execution of verification procedures based on bilateral agreements, the process aligns with the materiality requirements and the reasonable assurance level recognized by authorities.
- Materiality : 5%.

Objective

The purpose of this verification exercise is, by review of objective evidence, to independently review:

- Whether the life cycle GHG emissions of the product are as declared by the organization's GHG assertion.
- The data reported is accurate, complete, consistent, transparent and free of material error or omission.

Conclusion

- SGS's approach is risk-based, drawing on an understanding of the risks associated with reporting the life cycle GHG emissions of product information and the controls in place to mitigate these risks. Our examination included assessment and a test of evidence relevant to the amounts and disclosures in relation to the reported life cycle GHG emissions of the product. We planned and performed our work to obtain the information, explanations and evidence that the life cycle GHG emissions are free from material misstatement.
- Verification Opinion: the opinion of SGS is modified in accordance with the following described circumstances.
 - The verifier has sufficient and appropriate evidence to support the material emissions, removals, or storage.
 - The verifier applies appropriate criteria for the material emissions, removals, or storage.
 - When the verifier intends to rely on relevant controls, the effectiveness of those controls has been assessed.
 - The verifier, applying the ISO 14067:2018 standard, presents the following findings. After adjustments and corrections, no material errors were identified.
 - Not clarifying reasonable allocation principles
 - Not clarifying product declaration units
 - Inconsistencies between process maps and inventory boundaries
 - Unverified product output
 - Incorrect input quantities for multiple raw materials
 - Not clarifying process emission sources
 - After adjustments and corrections, no material errors were identified.

- Retention Limitation:
 - The factory produces a variety of products in various formats and packaging, including B2B and B2C life cycle products. Due to limited data collection and analysis capabilities, the allocation principle can only be based on product production weight, which limits the actual amount of allocated energy resources.

Confidentiality

The reports and attachments may contain relevantly confidential information of the clients. In addition to being submitted as governmental application or certification documents, the reports and attachments are not allowed to be edited, duplicated, or published without the clients' agreement in written form.

Avoidance of Conflict of Interest

The reports and attachments are completely complied with the standards and procedures that related-authorities established. The reports and attachments of auditing process are conduct with fairness and honesty. If not, the auditing institution not only has to bear the relevant compensation duties, but also to receive legal charge and punishment.

Verifier Group

Above opinions coincide with auditing process with fairness and impartiality, and aim at the emission of clients.

Lead Verifier:

Kai ping Teh

Verifier:

Chih Yuan Kuo

This opinion shall be interpreted with the GHG assertion of NAN LIU GROUP as a whole. This result shall be valid for a maximum period of two years, after which the GHG emission shall be re-assessed.

Note: This Opinion is issued, on behalf of Client, by SGS Taiwan Ltd. ("SGS") under its General Conditions for Green Gas Verification Services available at http://www.sgs.com/terms_and_conditions.htm. The findings recorded hereon are based upon an audit performed by SGS. A full copy of this Opinion, the findings and the supporting Carbon Footprint Assertion may be consulted at NAN LIU ENTERPRSE COM, No.699 Silin Road, Yanchao District, Kaohsiung 825, Taiwan.R.O.C. This Opinion does not relieve Client from compliance with any bylaws, federal, national or regional acts and regulations or with any guidelines issued pursuant to such regulations. Stipulations to the contrary are not binding on SGS and SGS shall have no responsibility vis-à-vis parties other than its Client.