

Independent Validation Opinion

DNV Business Assurance Korea Ltd. (hereafter, "DNV") has been commissioned by DONGSUNG FINETEC CO., Ltd. (hereafter, "Company") to perform a validation of carbon footprint for HFO R-PUF(Reinforced Polyurethane foam)(hereafter "HFO-R-PUF") that produced in Company's Anseong plant.

Scope of Validation

The validation covers the carbon footprint based on life-cycle assessment of entire value chain of HFO R-PUF manufacturing, and the scope of validation is as follows;

- Functional Unit: Product 1ton
- Product: HFO R-PUF (Density 130 kg/m³)
- Process: HFO R-PUF manufacturing process (Anseong plant)
- System Boundary: Cradle to Gate (Partial: Up to the R-PUF manufacturing process)
- Covered Data period: 1 January 2025 to 31 December 2025(Shared process with HFC R-PUF manufacturing) and Line tested Mass Production Spec data
- Impact Assessment Methodology: IPCC AR6,
- Others: Although the product is shipped after subsequent processing following foam manufacturing, the analysis was conducted using foam manufacturing as the system boundary, and the blowing agent was assumed to be 100% released into the atmosphere during the product curing process and reflected in the direct emissions.

Validation Criteria

The Carbon Footprint of the product was conducted in accordance with 'ISO 14040:2006/Amd 1:2020', 'ISO 14044:2006/Amd 2:2020', and 'ISO 14067:2018'. The validation was performed in accordance with the principles and requirements of 'ISO 14064-3:2019 (Part 3: Specification with guidance for the verification and validation of greenhouse gas statements)', based upon a limited level of assurance. The validity of data input (activity data collection and processing), unit conversion, and calculation was evaluated using activity data from the line tested Mass Production Spec data and HFC R-PUF process data that shares the production process

Limitations

The scope of the validation is limited to the assessment of the Carbon Footprint based on the 'R-PUF analysis report' prepared by the company. The validation was conducted based on data corresponding to the data collection period, including data on raw material usage, energy consumption, transportation, and production output, etc. DNV does not guarantee the reliability of the results if any material discrepancies affecting the Carbon Footprint results are identified after the validation. In addition, the validation was based on Line tested Mass Production Data and no assurance is provided regarding any changes occurring after the date of this validation.

Validation Opinion

Based on the process and procedures conducted, there is no evidence that the GHG statement is not materially correct and is not a fair representation of data and information.

- DNV presents an 'Unmodified' opinion on the Carbon Footprint of HFO R-PUF.

Product	Result	Unit	Comments
HFO R-PUF	59.72E+00	ton CO ₂ eq	

20 May 2026
Seoul, Korea

Responsibilities of the Directors of GS Caltex and DNV

The Directors of GS Caltex have sole responsibility for the preparation of the LCA Report. Our Opinion represents our independent opinion and is intended to inform all related stakeholders.

DNV was not involved in the preparation of any statements or data included in the LCA Report by GS Caltex except for this Verification Opinion.

DNV's assurance engagement is based on the assumption that the data and information provided by GS Caltex to us as part of our review have been provided in good faith. DNV expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Independent Verification Opinion.

Competence and Independence

DNV's established policies and procedures are designed to ensure that DNV, its personnel and, where applicable, others are subject to independence requirements (including personnel of other entities of DNV) and maintain independence where required by relevant ethical requirements. This engagement work was carried out by an independent team of GHG assurance professionals.

DNV applies its own management standards and compliance policies for quality control, which are based on the principles enclosed within ISO/IEC 17029:2019 - Conformity Assessment Requirements for validation and verification bodies, and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

DNV Business Assurance Korea

DNV Business Assurance Korea Ltd. is part of DNV Group, a global provider of certification, verification, assessment and training services, assisting customers to achieve sustainable business performance.

DNV Business Assurance Korea
J.S. Country Representative
Jang-sup Lee

