Environmental Product Declaration

IN ACCORDANCE WITH ISO 14025 AND ISO 21930

Program Operator: Smart EPD®
www.smartepd.com

SmartEPD-2025-001-0676-01

Gaco Flex S4200 High-Adhesion Solvent - Free Silicone Coating

Date of Issue	Expiration date	Last updated
Dec 10, 2025	**Dec 10, 2030**	**Dec 10, 2025**

Refer to the EPD Library at www.smartepd.com for the latest EPD listing information

General Information

Gaco

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Product Name:	Gaco Flex S4200 High-Adhesion Solvent - Free Silicone Coating
Functional Unit:	1 m2
Declaration Number:	SmartEPD-2025-001-0676-01
Date of Issue:	December 10, 2025
Expiration:	December 10, 2030
Last updated:	December 10, 2025
EPD Scope:	Cradle to grave A1 - A3, A4, A5, B1 - B7, C1 - C4
Market(s) of Applicability:	North America

General Organization Information

For more information about the organization, please visit https://gaco.com/.

Limitations, Liability, and Ownership

Environmental declarations from different programs (ISO 14025) may not be comparable. Comparison of the environmental performance of products using EPD information shall be based on the product's use and impacts at the building level, and therefore EPDs may not be used for comparability purposes when not considering the whole building life cycle. EPD comparability is only possible when all stages of a life cycle have been considered. However, variations and deviations are possible. Example of variations: Different LCA software and background LCI datasets may lead to differences results for upstream or downstream of the life cycle stages declared. The EPD owner has sole ownership, liability, and responsibility for the EPD.
A manufacturer shall not make claims based on an industry-average EPD which leads the market to believe the industry-average is representative of manufacturer-specific or product-specific results.

Reference Standards

Standard(s):	ISO 14025 and ISO 21930
Core PCR:	NSF Product Category Rules for Roof Coatings: NAICS 324122 & 325510 v.2, extension 3 Date of issue: November 01, 2024 Valid until: November 01, 2029
Sub-category PCR review panel:	Contact Smart EPD for more information.
General Program Instructions:	Smart EPD General Program Instructions v.2.0, March 2025

Verification Information

LCA Author/Creator:	Sherrie MacWilliams | Gaco | sherrie.macwilliams@amrize.com
EPD Program Operator:	Smart EPD | info@smartepd.com | www.smartepd.com 585 Grove St., Ste. 145, Herndon, VA 20170, USA
Verification:	Independent critical review of the LCA and data, according to ISO 14044 and ISO 14071: External Lucas Pedro Berman | Senda - Consultoria Ambiental & Energetica info@sendaconsultorias.com Independent external verification of EPD, according to ISO 14025 and reference PCR(s): External Lucas Pedro Berman | Senda - Consultoria Ambiental & Energetica info@sendaconsultorias.com

Product Information

Functional Unit:	1 m2
Mass:	0.6489 kg
Reference Service Life:	20 Years
Product Specificity:	✗ Product Average ✓ Product Specific

Product Description

GacoFlex S4200 White is a high-adhesion, solvent-free, single-component waterproof elastomeric moisture-curing silicone coating that does not require a primer over most substrates. S4200 is ideal for use as a maintenance coating system over metal roofs, weathered single ply membranes, and polyurethane foam roofs (including GacoRoofFoam). S4200 is ideal for use over aged SBS, APP, and built-up roofing, where the membrane surface is in sound condition but requires a renewal of the membrane surface due to the normal effects of use and aging. S4200 provides a seamless, weather-tight seal that protects the roofing substrate from degradation caused by UV, water, and other normal weathering hazards. A roof coated with S4200 is ideal for use as part of a rainwater catchment system.

Application involves cleaning and preparing the roof surface, then applying the coating using rollers, brushes, or sprayers in one or more layers. Once cured, the coating forms a flexible, weather-resistant membrane that adheres tightly to the substrate.

Product Specifications

Product Classification Codes: UNCPC - 5453
EC3 - ThermalMoistureProtection -> DampproofingAndWaterproofing

Product Thickness: 18 mm

Material Composition

Material/Component Category	Origin	% Mass
Additives	Various	2-10
Fillers	USA	25-50
Pigments	USA	2-10
Resins	Various	50-80

Packaging Material	Origin	kg Mass
Cardboard	None	9.16e-06
Steel	None	4.52e-05
Plastic film	None	3.94e-06
HDPE	None	3.83e-04

Biogenic Carbon Content	kg C per m2
Biogenic carbon content in product	None
Biogenic carbon content in accompanying packaging	0.00000425

Hazardous Materials
No regulated hazardous or dangerous substances are included in this product.

EPD Data Specificity

Primary Data Year: 2024

Manufacturing Specificity:

- ✗ Industry Average
- ✗ Manufacturer Average
- ✓ Facility Specific

System Boundary

Production	A1	Raw material supply	✓
	A2	Transport	✓
	A3	Manufacturing	✓
Construction	A4	Transport to site	✓
	A5	Assembly / Install	✓
Use	B1	Use	✓
	B2	Maintenance	✓
	B3	Repair	✓
	B4	Replacement	✓
	B5	Refurbishment	✓
	B6	Operational Energy Use	✓
	B7	Operational Water Use	✓
End of Life	C1	Deconstruction	✓
	C2	Transport	✓
	C3	Waste Processing	✓
	C4	Disposal	✓
Benefits & Loads Beyond System Boundary	D	Recycling, Reuse Recovery Potential	ND

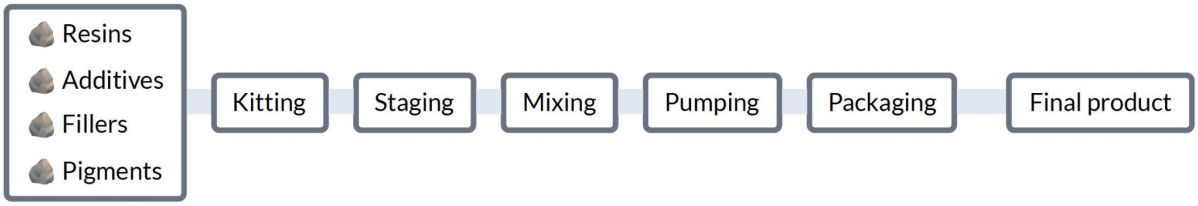
Note:

ND = Module not declared

Plants

Waukesha Wisconsin
1245 Chapman Dr, Waukesha, WI 53186, USA

Product Flow Diagram



Software and Database

LCA Software: Emidat v. 1.0

LCI Foreground Database(s): Ecoinvent v. 3.10

LCI Background Database(s): Ecoinvent v. 3.10

A foreground LCI database is the database used to model the primary, site-specific data collected for this EPD. A background LCI database is the database used to model generic or non-specific data.

Data Quality

Data representativeness has been assessed following the guidelines provided in the standard. The overall data representativeness is rated as good with an overall score of 4.00/5

Data Sources

Material/Process Category	Module	Material/Process Name	Inventory Dataset Name	Dataset Geographic Region	Reporting Period/Year Dataset Represents	Reference	Amount (if relevant)	Unit
ND	ND	ND	ND	ND	ND	ND	ND	ND

Life Cycle Module Descriptions

Stage of Material Production and Construction
Module A1: Extraction and processing of raw materials (e.g., polymers, fillers, solvents) used in the roof coating formulation. Module A2: Transportation of all raw materials and intermediates to the production facility. Module A3: Production of the roof coating, including mixing, packaging, and waste treatment. Module A4: Distribution of the finished roof coating from the factory to the construction site. Module A5: On-site application of the coating, including packaging waste disposal.

Use Stage
Module B1: Release of emissions during the drying of roof coatings, depending on the coating type. Module B2: Inspections or touch-ups. Set to zero for passive systems like coatings. Module B3: Localized reapplication of coating to restore function, using negligible quantities of the original or compatible product. Set to zero. Module B4: Complete reapplication of the coating at the end of its service life, similar to A5. Module B5: Refurbishment, usually not applicable for roof coatings and reported as zero. Module B6: Operational Energy Use: Set to zero, as roof coatings do not consume energy during use. Module B7: Operational Water Use: Also set to zero, since the coating does not require water in use.

Disposal Stage
Module C1: Removal of the coating at end-of-life or during roof replacement, often manually. Module C2: Transport of removed coating waste to a landfill or treatment facility. Module C3: Incineration of waste with energy recovery. Module C4: Final disposal of waste in sanitary landfill.

LCA Discussion

Allocation Procedure

Allocation of co-products was avoided, to the extent it was possible, based on the guidance given in ISO 14044:2006, 4.3., in EN 15804+A2:2019 and section 4.5.1 of Construction Products PCR 2019:14 version 1.3.4. Energy and water use was allocated to the product based on mass. Waste allocation followed the polluter pays principle as indicated in section 4.5.2 of the PCR. Total production output from the production process was provided.

Cut-off Procedure

No cut-off criteria are defined for this study. The system boundary was defined based on relevance to the goal of the study. For the processes within the system boundary, all available energy and material flow data have been included in the model. In cases where no matching life cycle inventories are available to represent a flow, proxy data have been applied based on conservative assumptions regarding environmental impacts.

Renewable Electricity

Energy Attribute Certificates (EACs) such as Renewable Energy Certificates (RECs) or Power Purchase Agreements (PPAs) are included in the baseline reported results:	✕ No

Scenarios

Transport to the building/construction site (A4)
A4 Module

Vehicle Type:	transport, freight, lorry >32 metric ton, EURO6
Transport Distance:	905 km
Capacity Utilization:	53.30 %
Weight of products transported:	0.65 kg
Energy demand:	1.58 MJ/t*km

Installation in to the building/construction site (A5)

A5 Module

Treatment of Cardboard waste:	Incineration
Treatment of Steel waste:	Incineration
Treatment of Plastic film waste:	Recycling
Treatment of HDPE waste:	Incineration
Installation loss:	5.00 %

Use (B1)

B1 Module

NMVOC emissions per drying process:	0.05 kg/liter
Number of drying processes:	1.00

Replacement (B4)

B4 Module

Reference Service Life:	20 Years
Replacement Cycle:	1 (ESL/RSL)-1
Product lifetime:	25.00 years

End of Life (C1 - C4)

C1 - C4 Modules

Collection Process

Distance to incineration:	11.00 km
Light commercial: Activity:	transport, freight, light commercial vehicle
Light commercial: Distance:	11.00 km
Light commercial: Energy demand:	29.82 MJ/t*km

Recovery

Incineration:	0.65 kg
Distance to incineration:	11.00 km
Light commercial: Activity:	transport, freight, light commercial vehicle
Light commercial: Distance:	11.00 km
Light commercial: Energy demand:	29.82 MJ/t*km

Disposal

Product or Material for Final Disposal:	0.65 kg
Distance to incineration:	11.00 km
Light commercial: Activity:	transport, freight, light commercial vehicle
Light commercial: Distance:	11.00 km
Light commercial: Energy demand:	29.82 MJ/t*km

Distance to incineration:	11.00 km
Light commercial: Activity:	transport, freight, light commercial vehicle
Light commercial: Distance:	11.00 km
Light commercial: Energy demand:	29.82 MJ/t*km

Results

Environmental Impact Assessment Results

IPCC AR5 GWP 100, TRACI 2.1

per 1 m2 of product .

LCIA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks.

Impact Category	Method	Unit	A1A2A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4
GWP-total	IPCC AR5 GWP 100	kg CO2 eq	1.88e+0	6.02e-2	1.63e-1	0	0	0	0	0	0	0	0	1.49e-2	1.29e+0	0
ODP	TRACI 2.1	kg CFC 11 eq	6.78e-7	1.04e-9	3.43e-8	0	0	0	0	0	0	0	0	2.37e-10	6.16e-9	0
AP	TRACI 2.1	kg SO2 eq	8.14e-3	1.35e-4	4.48e-4	0	0	0	0	0	0	0	0	6.26e-5	6.73e-4	0
EP	TRACI 2.1	kg N eq	1.77e-2	6.26e-5	9.87e-4	0	0	0	0	0	0	0	0	2.52e-5	2.01e-3	0
SFP	TRACI 2.1	kg O3 eq	1.15e-1	2.88e-3	6.58e-3	9.04e-2	0	0	0	0	0	0	0	1.56e-3	1.38e-2	0

Note:

Not all abbreviated indicators listed below may be present in the results above. The inclusion of indicators varies based on PCR requirements.

Abbreviations:

GWP = Global Warming Potential, 100 years (may also be denoted as GWP-total, GWP-fossil (fossil fuels), GWP-biogenic (biogenic sources), GWP-luluc (land use and land use change)), ODP = Ozone Depletion Potential, AP = Acidification Potential, EP = Eutrophication Potential, SFP = Smog Formation Potential, POCP = Photochemical oxidant creation potential, ADP-Fossil = Abiotic depletion potential for fossil resources, ADP-Minerals&Metals = Abiotic depletion potential for non-fossil resources, WDP = Water deprivation potential, PM = Particular Matter Emissions, IRP = Ionizing radiation, human health, ETP-fw = Eco-toxicity (freshwater), HTP-c = Human toxicity (cancer), HTP-nc = Human toxicity (non-cancer), SQP = Soil quality index.

Comparisons cannot be made between product-specific or industry average EPDs at the design stage of a project, before a building has been specified. Comparisons may be made between product-specific or industry average EPDs at the time of product purchase when product performance and specifications have been established and serve as a functional unit for comparison. Environmental impact results shall be converted to a functional unit basis before any comparison is attempted.
Any comparison of EPDs shall be subject to the requirements of ISO 21930 or EN 15804. EPDs are not comparative assertions and are either not comparable or have limited comparability when they have different system boundaries, are based on different product category rules or are missing relevant environmental impacts. Such comparison can be inaccurate, and could lead to erroneous selection of materials or products which are higher-impact, at least in some impact categories.

Resource Use Indicators

per 1 m2 of product .

Indicator	Unit	A1A2A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4
PERE	MJ, net calorific value	2.45e+0	1.20e-2	1.27e-1	0	0	0	0	0	0	0	0	5.37e-3	7.49e-2	0
PERM	MJ, net calorific value	1.17e-4	0	-1.11e-4	0	0	0	0	0	0	0	0	0	0	0
PERT	MJ, net calorific value	2.45e+0	1.20e-2	1.27e-1	0	0	0	0	0	0	0	0	5.37e-3	7.49e-2	0
PENRE	MJ, net calorific value	2.36e+1	9.19e-1	1.33e+0	0	0	0	0	0	0	0	0	2.07e-1	1.97e+0	0
PENRM	MJ, net calorific value	4.72e+0	0	2.20e-1	0	0	0	0	0	0	0	0	0	-4.71e+0	0
PENRT	MJ, net calorific value	2.84e+1	9.19e-1	1.55e+0	0	0	0	0	0	0	0	0	2.07e-1	-2.73e+0	0
SM	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RSF	MJ, net calorific value	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NRSF	MJ, net calorific value	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RE	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FW	m3	4.75e-2	1.35e-4	2.44e-3	0	0	0	0	0	0	0	0	3.55e-5	1.25e-3	0

Note:

Not all abbreviated indicators listed below may be present in the results above. The inclusion of indicators varies based on PCR requirements.

Abbreviations:

RPRE or PERE = Renewable primary resources used as energy carrier (fuel), RPRM or PERM = Renewable primary resources with energy content used as material, RPRT or PERT = Total use of renewable primary resources with energy content, NRPRE or PENRE = Non-renewable primary resources used as an energy carrier (fuel), NRPRM or PENRM = Non-renewable primary resources with energy content used as material, NRPRT or PENRT = Total non-renewable primary resources with energy content, SM = Secondary materials, RSF = Renewable secondary fuels, NRSF = Non-renewable secondary fuels, RE = Recovered energy, ADPF = Abiotic depletion potential, FW = Use of net freshwater resources, VOCs = Volatile Organic Compounds.

Waste and Output Flow Indicators

per 1 m2 of product .

Indicator	Unit	A1A2A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4
HWD	kg	1.04e-2	0	3.30e-2	0	0	0	0	0	0	0	0	0	6.49e-1	0
NHWD	kg	1.57e-2	0	1.22e-3	0	0	0	0	0	0	0	0	0	0	0
RWD	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRU	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MFR	kg	2.93e-3	0	1.50e-4	0	0	0	0	0	0	0	0	0	0	0
MER	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EE	MJ	1.92e-1	0	6.12e-1	0	0	0	0	0	0	0	0	0	1.19e+1	0

Note:

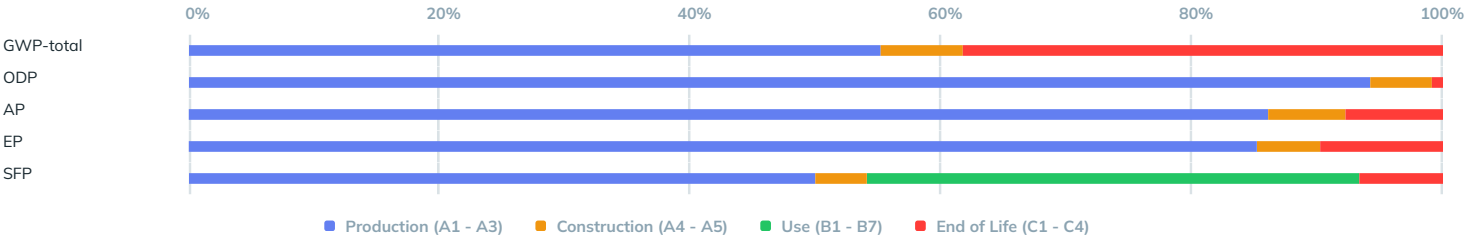
Not all abbreviated indicators listed below may be present in the results above. The inclusion of indicators varies based on PCR requirements.

Abbreviations:

HWD = Hazardous waste disposed, NHWD = Non-hazardous waste disposed, RWD = Radioactive waste disposed, HLRW = High-level radioactive waste, ILLRW = Intermediate- and low-level radioactive waste, CRU = Components for re-use, MFR or MR = Materials for recycling, MER = Materials for energy recovery, MNER = Materials for incineration, no energy recovery, EE or EEE = Recovered energy exported from the product system, EET = Exported thermal energy.

Interpretation

Based on the results and study assumptions, methods, and data, the cradle-to-gate impacts (A1A3) for the product represent approximately 50% of the total Global Warming Potential (GWP). The remaining impacts occur in later life-cycle stages.



References

Standards
EN 14025: Environmental labels and declarations - Type III environmental declarations - Principles and procedures
EN 14040: Environmental management - Life cycle assessment - Principles and framework
EN 14044: Environmental management - Life cycle assessment - Requirements and guidelines
DIN CEN/TR 15941: Sustainability of construction works - Environmental product declarations - Methodology for selection and use of generic data
EN 15942: Sustainability of construction works - Environmental product declarations - Communication format business-to-business
ISO 21930: Sustainability in buildings and civil engineering works - Core rules for environmental product declarations of construction products and services
ecoinvent v3.10: ecoinvent, Zurich, Switzerland, database version 3.10

Further References
Emidat Platform v1.0.0: emidat.com
NSF: RCMA Roof Coatings: NAICS 324122 & 325510 Version 2 - extension 3, valid through November 01, 2029.
Smart EPD® Part A: Product Category Rules for Building and Construction Products and Services, Standard 1000, Version1.2. Issue date: 14.03.2025; valid through 14-03-2030