ISOLATEK
Fireproofing innovators since 1875

CAFCO® 300
CAFCO® 300 AC
CAFCO® 300 HS
CAFCO® 3000

The CAFCO® 300 series products are the most innovative, widely specified and used commercial density, Wet Mix Spray-Applied Fire Resistive Materials (SFRM) in the world. CAFCO 300 series products are Gypsum-based formulations that offer the most cost effective fire resistance performance per unit thickness of any commercial SFRM in the world.

The thermal performance advantages of CAFCO 300 series result in reduced installed costs over any commercial density Wet Spray fire protection material, while providing industry leading physical performance and application efficiencies that are unsurpassed.

Performance dashboard

Features & functionality

CAFCO 300: Most widely used and thermally efficient wet-mix SFRM in the industry.

CAFCO 300 AC: Specially formulated to increase application productivity.

CAFCO 300 HS: Designed to satisfy 430 psf high rise bond strength requirement for buildings up to 420 ft in height.

CAFCO 3000: Formulated to maintain 1000 psf bond strength required for buildings over 420 ft in height.

Visit Isolatek for more product information:
CAFCO® 300, CAFCO® 300 AC, CAFCO® 300 HS, CAFCO® 3000

MasterFormat® 07 81 00
CAFCO SFRM Guide Spec
For spec help, contact us or call 800-631-9600

Environment & materials

Improved by:

Tested to meet (CDPH) Standard Method v1.1 & EPA Method 24 for VOCs

Post-consumer recycled content used

Certifications, rating systems & disclosures:

Declare, Red List Free (CAFCO® 300 series, CAFCO® 3000)

Health Product Declaration (CAFCO® 300, CAFCO® 300 AC, CAFCO® 300 HS, CAFCO® 3000)

Cellulosic – ANSI/UL263 (ASTM E119) – Fire Tests of Building Construction and Materials

UL Classification Mark

Further explanatory materials may be obtained from:
Sustainable Minds

See LCA, interpretation & rating systems

See materials, interpretation & rating systems

SM Transparency Report (EPD)™ + Material Health Overview™

VERIFICATION	LCA
3rd-party reviewed	✓
	Transparency Report (EPD)
3rd-party verified	✓

Validity: 08/12/25 – 08/11/30
ISL – 08122025 – 001

MATERIAL HEALTH	Material evaluation
Self-declared	✓

This environmental product declaration (EPD) was externally verified by Jack Geibig (Ecoform) according to ISO 21930:2017; ISO 14025:2006; Smart EPD® Part A; and Smart EPD Part B for spray-applied fire-resistive materials (SFRM).

In accordance with ISO 14044 and the reference PCR, this life cycle assessment was conducted by Sustainable Minds and reviewed by [Reviewer Name] (Ecoform).

Ecoform, LLC
11903 Black Road
Knoxville, TN 37932
(865) 850-1883
www.ecoform.com

SUMMARY

Reference PCR
Smart EPD® Part B PCR for Spray-Applied Fire-Resistive Materials, 1000-003, v4.0, 01/25 – 01/30

System boundaries
Cradle to gate (A1 – A3) with installation (A4, A5)

Market of applicability
North America

Declared unit: 1,000 kg

LCIA methodology: GWP 100 IPCC 2021 (AR6), TRACI 2.2

LCA software; LCI database
SimaPro Craft 10.2; ecoinvent 3.11, US-EI 2.2

LCA conducted by: Sustainable Minds

Public LCA:
LCA of Isolatek Passive Fire Protection Products

EPD holder:
Isolatek International

Isolatek International
14231 Seaway Rd., Suite 1003
Gulfport, MS 3950
www.isolatek.com
800 631 9600

Contact us

© 2025 | The SM Transparency Report [EPD]™ Program is operated by Sustainable Minds® (www.sustainableminds.com) | Privacy policy

LCA results & interpretation

CAFCO® 300 Series

CAFCO® 300 | CAFCO® 300 AC | CAFCO® 300 HS | CAFCO® 3000 | EPD additional content | Material health

Scope and summary

○ Cradle to gate ✔ **Cradle to gate with options** ○ Cradle to grave

Application
The CAFCO® 300 is a durable, gypsum based, wet mix, commercial density spray-applied fire resistive material (SFRM) designed to provide fire protection to concealed floor and roof assemblies, steel beams, columns, and joists in building construction projects.

Declared unit
1,000 kg of spray-applied fire-resistive material, packaging included.

Manufacturing activities
Products are manufactured by blending the specified bulking agent with a number of product-specific binders to achieve prescribed fire rating performance in the field. Finished goods are packaged in individual bags, stacked on pallets, and stretch wrapped before delivery to job sites.

Manufacturing data
Reporting period: January 2024 – December 2024
Locations: San Bernardino, CA; Stanhope, NJ; and Houston, TX

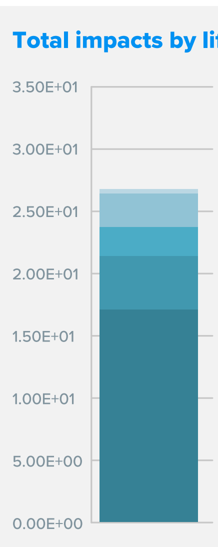
Distribution and installation scenarios
The product belongs to the CAFCO 300 SFRM subcategory, as the product density falls within the range of 15–20 pcf (240–320 kg/m^3). Distribution from the manufacturing facility to the construction site is assumed to be 500 km (311 miles) using a single unit truck with an empty backhaul. 1.377 m^3 of water and 6.3 kWh of electricity is assumed to be consumed during installation.

No gasoline or diesel-powered equipment is assumed to be used during installation. Therefore, the net calorific value (i.e., Lower Heating Value, LHV) of fuels is considered to be zero in A5.

Material composition by wt%

PART	WT%
Natural gypsum, w/o flue gas desulfurization gypsum	55-65%
Natural unexpanded vermiculite	20-30%
Calcium carbonate	5-8%
Recycled content (cellulose)	0-7%
Bentonite clay	4-7%

Total impacts by life cycle stage [mPts/decl unit]



LIFE CYCLE STAGE	MPTS/DECL. UNIT
Raw material supply	1.70E+01
Transport to factory	4.44E+00
Manufacturing	2.40E+00
Transport to building site	2.84E+00
Installation	2.90E-01

Total impacts = 2.70E+01 mPts

What's causing the greatest impacts

All life cycle stages
The environmental impacts are primarily driven by the raw material supply phase. The raw material extraction and upstream processing stage dominates across all impact categories. Following this, the raw material transportation, manufacturing, and transport to the building site phases contribute comparable levels of impact. The installation stage results in the lowest overall impacts.

Raw material supply
The raw material supply phase is the most significant contributor, accounting for over 50% of the total global warming potential under both the IPCC AR6 and TRACI 2.2 methodologies. This impact is largely driven by the use of natural gypsum, which alone accounts for about 40% of CO_2-equivalent emissions within this phase. Raw material supply is also the dominant contributor accounting for 60–90% of the total impacts in most categories, with the exception of non-carcinogenics.

Transport to factory
The transport to factory phase makes a significant contribution to the non-carcinogenics category, particularly for products manufactured at the San Bernardino, CA and Houston, TX plants. In contrast, for products manufactured at the Stanhope, NJ facility, transportation to the building site has a higher impact in this category compared to transport to the factory. The primary driver of non-carcinogenic effects during this phase is the inbound transport of raw materials, which leads to emissions of nitrogen oxides (NO_x) and particulate matter, both known to cause potential non-carcinogenic health effects.

Manufacturing and transport to building site
The manufacturing and transport to building site phases contribute similarly to results. For global warming potential, their impacts range between 7% and 10%.

Installation
The installation phase has a minimal overall impact. Its contribution to global warming potential ranges between 5% and 7%. Among all other impact categories, A5 has an even lower contribution.

Embodied carbon
Embodied carbon can be defined as the cradle-to-gate (A1-A3) $IPCC_{Total}$ global warming potential impacts. The embodied carbon per declared unit of CAFCO® 300 is 3.57E+02 kg CO_2-eq for San Bernardino, 4.22E+02 kg CO_2-eq for Stanhope, and 4.22E+02 kg CO_2-eq for Houston.

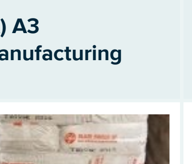
How we're making it greener

Isolatek International is committed to legal compliance and ethical business practices in all of our operations. Isolatek's vendors must act in accordance with the applicable statutory and international standards regarding environmental protection. Isolatek's vendors must minimize environmental pollution and make continuous improvements in environmental protection.

Isolatek's vendors must set up or use a reasonable environmental management system. In Isolatek's purchase arrangements, vendors must observe all applicable laws of their country and international standards, including but not limited to laws and standards relating to the environment, as well as health and safety.

See how we make it greener

LCA results

LIFE CYCLE STAGE	RAW MATERIAL SUPPLY	TRANSPORTATION	MANUFACTURING	TRANSPORTATION	INSTALLATION
Information modules: Included (X) | Excluded (MND)* *Modules B, C, and D are excluded.	(X) A1 Raw Material extraction and upstream processing	(X) A2 Transport to factory	(X) A3 Manufacturing	(X) A4 Transport to building site	(X) A5 Installation
					

SM Single Score

Learn about SM Single Score results

A variation of 10 to 20% | A variation greater than 20%

Impacts per declared unit	1.70E+01 mPts	4.44E+00 mPts	2.40E+00 mPts	2.84E+00 mPts	2.90E-01 mPts
Materials or processes contributing >20% to total impacts in each life cycle stage	Raw extraction and upstream manufacturing.	Truck and rail transportation used to transport raw materials to manufacturing site.	Energy and ancillary materials required to make the passive fire protection product.	Truck and rail transportation used to transport finished products to construction site.	Energy and water used for installation.

TRACI v2.2 results per declared unit - CAFCO® 300 produced in San Bernardino, CA

Ecological damage

Impact category	Unit	RAW MATERIAL SUPPLY	TRANSPORT	MANUFACTURING	TRANSPORT TO BUILDING SITE	INSTALLATION
GWP, $IPCC_{Total}$	kg CO_2 eq	2.19E+02	1.07E+02	3.20E+01	4.16E+01	2.68E+01
GWP, $IPCC_{Biogenic}$	kg CO_2 eq	-8.78E+01	0.00E+00	-2.24E+01	0.00E+00	2.24E+01
GWP, $IPCC_{Fossil}$	kg CO_2 eq	3.06E+02	1.07E+02	5.44E+01	4.16E+01	4.36E+00
GWP, $IPCC_{Luluc}$	kg CO_2 eq	4.05E-01	5.63E-03	4.13E-02	2.21E-03	3.23E-03
GWP, $TRACI_{Total}$	kg CO_2 eq	2.18E+02	1.05E+02	3.10E+01	4.10E+01	3.10E+01
GWP, $TRACI_{Biogenic}$	kg CO_2 eq	-8.78E+01	0.00E+00	-2.24E+01	0.00E+00	2.24E+01
GWP, $TRACI_{Fossil}$	kg CO_2 eq	3.06E+02	1.05E+02	5.34E+01	4.10E+01	8.54E+00
Ozone depletion	kg CFC-11 eq	8.74E-06	1.44E-06	1.03E-06	5.59E-07	1.93E-08
Acidification	kg SO_2 eq	4.00E-07	4.05E-08	6.67E-08	1.60E-08	1.77E-08
Marine eutrophication	kg N eq	2.89E-01	8.75E-02	1.89E-02	3.22E-02	1.75E-03
Freshwater eutrophication	kg P eq	5.60E-03	3.32E-04	8.61E-04	1.32E-04	1.86E-04

Human health damage

Impact category	Unit	RAW MATERIAL SUPPLY	TRANSPORT	MANUFACTURING	TRANSPORT TO BUILDING SITE	INSTALLATION
Smog	kg O_3 eq	2.33E+00	3.80E-01	1.34E-01	1.42E-01	1.37E-02
Respiratory effects	kg $PM_{2.5}$ eq	4.01E-05	1.59E-05	1.91E-06	6.32E-06	3.39E-07

Additional environmental information

Impact category	Unit	RAW MATERIAL SUPPLY	TRANSPORT	MANUFACTURING	TRANSPORT TO BUILDING SITE	INSTALLATION
Carcinogenics	CTU_h	3.18E+01	1.04E+01	2.11E+00	3.83E+00	1.64E-01
Non-carcinogenics	CTU_h	1.58E+02	3.29E+02	8.29E+00	1.31E+02	1.05E+00
Ecotoxicity	CTU_e	4.06E-01	4.36E-02	1.55E-02	1.68E-02	9.25E-03

TRACI v2.2 results per declared unit - CAFCO® 300 produced in Stanhope, NJ

Ecological damage

Impact category	Unit	RAW MATERIAL SUPPLY	TRANSPORT	MANUFACTURING	TRANSPORT TO BUILDING SITE	INSTALLATION
GWP, $IPCC_{Total}$	kg CO_2 eq	3.45E+02	2.97E+01	4.79E+01	4.16E+01	2.78E+01
GWP, $IPCC_{Biogenic}$	kg CO_2 eq	-1.39E+00	0.00E+00	-2.35E+01	0.00E+00	2.35E+01
GWP, $IPCC_{Fossil}$	kg CO_2 eq	3.46E+02	2.97E+01	7.14E+01	4.16E+01	4.36E+00
GWP, $IPCC_{Luluc}$	kg CO_2 eq	4.53E-01	1.58E-03	4.37E-02	2.21E-03	3.23E-03
GWP, $TRACI_{Total}$	kg CO_2 eq	3.44E+02	2.93E+01	4.66E+01	4.10E+01	3.22E+01
GWP, $TRACI_{Biogenic}$	kg CO_2 eq	-1.39E+00	0.00E+00	-2.35E+01	0.00E+00	2.35E+01
GWP, $TRACI_{Fossil}$	kg CO_2 eq	3.46E+02	2.93E+01	7.01E+01	4.10E+01	8.73E+00
Ozone depletion	kg CFC-11 eq	9.75E-06	4.00E-07	2.23E-06	5.59E-07	1.94E-08
Acidification	kg SO_2 eq	4.46E-07	1.14E-08	7.90E-08	1.60E-08	1.79E-08
Marine eutrophication	kg N eq	3.25E-01	2.30E-02	2.38E-02	3.22E-02	1.77E-03
Freshwater eutrophication	kg P eq	6.26E-03	9.40E-05	9.88E-04	1.32E-04	1.87E-04

Human health damage

Additional environmental information

TRACI v2.2 results per declared unit - CAFCO® 300 produced in Houston, TX

Ecological damage

Impact category	Unit	RAW MATERIAL SUPPLY	TRANSPORT	MANUFACTURING	TRANSPORT TO BUILDING SITE	INSTALLATION
GWP, $IPCC_{Total}$	kg CO_2 eq	2.32E+02	6.08E+01	4.41E+01	4.16E+01	2.51E+01
GWP, $IPCC_{Biogenic}$	kg CO_2 eq	-7.66E+01	0.00E+00	-2.07E+01	0.00E+00	2.07E+01
GWP, $IPCC_{Fossil}$	kg CO_2 eq	3.08E+02	6.08E+01	6.49E+01	4.16E+01	4.35E+00
GWP, $IPCC_{Luluc}$	kg CO_2 eq	4.23E-01	3.13E-03	3.86E-02	2.21E-03	3.22E-03
GWP, $TRACI_{Total}$	kg CO_2 eq	2.32E+02	6.00E+01	4.31E+01	4.10E+01	2.89E+01
GWP, $TRACI_{Biogenic}$	kg CO_2 eq	-7.66E+01	0.00E+00	-2.07E+01	0.00E+00	2.07E+01
GWP, $TRACI_{Fossil}$	kg CO_2 eq	3.08E+02	6.00E+01	6.38E+01	4.10E+01	8.21E+00
Ozone depletion	kg CFC-11 eq	9.16E-06	8.16E-07	1.10E-06	5.59E-07	1.92E-08
Acidification	kg SO_2 eq	4.07E-07	2.19E-08	6.90E-08	1.60E-08	1.75E-08
Marine eutrophication	kg N eq	2.80E-01	5.86E-02	2.09E-02	3.22E-02	1.72E-03
Freshwater eutrophication	kg P eq	5.74E-03	1.78E-04	9.29E-04	1.32E-04	1.82E-04

Human health damage

Additional environmental information

Comparisons cannot be made between product-specific or industry average EPDs at the design stage of a project, before a building or construction works has been specified. Comparisons may be made between product-specific or industry average EPDs at the time of product purchase only when product or construction works 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 comparisons can be inaccurate and could lead to erroneous selection of materials or products that are higher-impact, at least in some impact categories.

References

LCA Background Report
LCA of Isolatek International Passive Fire Protection Products (public version), Isolatek 2025. Developed using the TRACI v2.2, IPCC 2021 AR6, CML, and Cumulative Energy Demand (LHV) impact assessment methodologies, SimaPro Craft 10.2 software, and ecoinvent v3.11 database.

ISO 14025, "Sustainability in buildings and civil engineering works -- Core rules for environmental product declarations of construction products and services"

ISO 21930:2007, "Sustainability in Building Construction — Environmental Declaration of Building Products" serves as the core PCR.

Smart EPD Part A product category rules for building and construction products and services; Version 1.2, March 2025. PCR review conducted by Jack Geibig (chair, jgeibig@ecoform.com); Terrie Boguski; and Hugues Imbeault-Tétreault.

Smart EPD Part B product category rules for Spray-applied Fire-Resistive Materials (SFRM); Version 4.0, January 2025. PCR review conducted by Thomas Gloria, PhD (chair, t.gloria@industrial-ecology.com); Karl Houser; and Jack Geibig.

Smart EPD General Program Instructions

Download PDF SM Transparency Report/ EPD

SM Transparency Reports (TR) are ISO 14025 Type III environmental declarations (EPD) that enable purchasers and users to compare the potential environmental performance of products on a life cycle basis. They are designed to present information transparently to make the limitations of comparability more understandable. Environmental declarations of products that conform to the same PCR and include the same life cycle stages, but are made by different manufacturers, may not sufficiently align to support direct comparisons. They therefore cannot be used as comparative assertions unless the conditions as defined in ISO 14025 Section 6.7.2. 'Requirements for Comparability' are satisfied. In order to support comparative assertions, this EPD meets all comparability requirements stated in ISO 14025:2006. However, differences in certain assumptions, data quality, and variability between LCA data sets may still exist. Example of variations: Different LCA software and background LCI datasets may lead to differences in results upstream or downstream of the life cycle stages declared. EPDs are only comparable if they conform with ISO 21930, this sub-category PCR, include all relevant information modules and are based on equivalent scenarios with respect to the construction works context. Some LCA impact categories and inventory items are still under development and can have high levels of uncertainty. The science supporting this additional environmental information is still under development and may have high levels of uncertainty that preclude international acceptance pending further development. Use caution when interpreting data in this category. To promote uniform guidance on the data collection, calculation, and reporting of results, the ACLCA methodology (ACLCA 2019) was used. The environmental impact results of products in this document are based on a declared unit and therefore do not provide sufficient information to establish comparisons. The results shall not be used for comparisons without knowledge of how the physical properties of the product impact the precise function at the construction level. The environmental impact results shall be converted to a functional unit basis before any comparison is attempted. 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.

Rating systems

The intent is to reward project teams for selecting products from manufacturers who have verified improved life-cycle environmental performance.

LEED BD+C: New Construction | v4 - LEED v4
Building product disclosure and optimization

Environmental product declarations

○ Industry-wide (generic) EPD	½ product
✔ Product-specific Type III EPD	1 product

LEED BD+C: New Construction | v4.1 - LEED v4.1
Building product disclosure and optimization

Environmental product declarations

○ Industry-wide (generic) EPD	1 product
✔ Product-specific Type III EPD	1.5 products

Green Globes for New Construction and Sustainable Interiors
Materials and resources

✔ NC 3.5.1.2 Path B: Prescriptive Path for Building Core and Shell

✔ NC 3.5.2.2 and SI 4.1.2 Path B: Prescriptive Path for Interior Fit-outs

BREEAM New Construction 2018
Mat 02 - Environmental impacts from construction products

Environmental Product Declarations (EPD)

○ Industry-average EPD	.5 points
○ Multi-product specific EPD	.75 points
✔ Product-specific EPD	1 point

SM Transparency Report (EPD)™ + Material Health Overview™

VERIFICATION	LCA
3rd-party reviewed	✔
	Transparency Report (EPD)
3rd-party verified	✔

Validity: 08/12/25 – 08/11/30
ISL – 08122025 – 001

MATERIAL HEALTH	Material evaluation
Self-declared	✔

This environmental product declaration (EPD) was externally verified by Jack Geibig (Ecoform) according to ISO 21930:2017; ISO 14025:2006; Smart EPD® Part A; and Smart EPD Part B for spray-applied fire-resistive materials (SFRM).

In accordance with ISO 14044 and the reference PCR, this life cycle assessment was conducted by Sustainable Minds and reviewed by [Reviewer Name] (Ecoform).

Ecoform, LLC
11903 Black Road
Knoxville, TN 37932
(865) 850-1883
www.ecoform.com

SUMMARY
Reference PCR
Smart EPD® Part B PCR for Spray-Applied Fire-Resistive Materials, 1000-003, v4.0, 01/25 – 01/30
System boundaries
Cradle to gate (A1 – A3) with installation (A4, A5)
Market of applicability
North America
Declared unit: 1,000 kg
LCIA methodology: GWP 100 IPCC 2021 (AR6), TRACI 2.2
LCA software; LCI database
SimaPro Craft 10.2; ecoinvent 3.11, US-EI 2.2
LCA conducted by: Sustainable Minds
Public LCA:
LCA of Isolatek Passive Fire Protection Products
EPD holder:
Isolatek International

Isolatek International
14231 Seaway Rd., Suite 1003
Gulfport, MS 3950
www.isolatek.com
800 631 9600

Contact us

LCA results & interpretation

CAFCO® 300 Series

CAFCO® 300 | CAFCO® 300 AC | CAFCO® 300 HS | CAFCO® 3000 | EPD additional content | Material health

Scope and summary

○ Cradle to gate ✔ **Cradle to gate with options** ○ Cradle to grave

Application

The CAFCO® 300 AC is a durable, gypsum based, wet mix, commercial density spray-applied fire resistive material (SFRM) designed to provide fire protection to concealed floor and roof assemblies, steel beams, columns, and joists in building construction projects.

Declared unit

1,000 kg of spray-applied fire-resistive material, packaging included.

Manufacturing activities

Products are manufactured by blending the specified bulking agent with a number of product-specific binders to achieve prescribed fire rating performance in the field. Finished goods are packaged in individual bags, stacked on pallets, and stretch wrapped before delivery to job sites.

Manufacturing data

Reporting period: January 2024 – December 2024
Locations: San Bernardino, CA; Stanhope, NJ; and Houston, TX

Distribution and installation scenarios

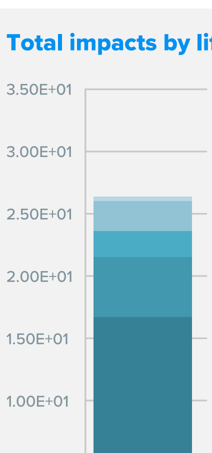
The product belongs to the CAFCO 300 SFRM subcategory, as the product density falls within the range of 15–20 pcf (240–320 kg/m^3). Distribution from the manufacturing facility to the construction site is assumed to be 500 km (311 miles) using a single unit truck with an empty backhaul. 1.377 m^3 of water and 6.3 kWh of electricity is assumed to be consumed during installation.

No gasoline or diesel-powered equipment is assumed to be used during installation. Therefore, the net calorific value (i.e., Lower Heating Value, LHV) of fuels is considered to be zero in A5.

Material composition by wt%

PART	WT%
Natural gypsum, w/o flue gas desulfurization gypsum	55-65%
Natural unexpanded vermiculite	20-30%
Calcium carbonate	5-8%
Recycled content (cellulose)	0-7%
Bentonite clay	4-7%

Total impacts by life cycle stage [mPts/decl unit]



LIFE CYCLE STAGE	MPTS/DECL. UNIT
Raw material supply	1.68E+01
Transport to factory	4.45E+00
Manufacturing	2.29E+00
Transport to building site	2.84E+00
Installation	2.89E-01
	Total impacts = 2.67E+01 mPts

What's causing the greatest impacts

All life cycle stages

The environmental impacts are primarily driven by the raw material supply phase. The raw material extraction and upstream processing stage dominates across all impact categories. Following this, the raw material transportation, manufacturing, and transport to the building site phases contribute comparable levels of impact. The installation stage results in the lowest overall impacts.

Raw material supply

The raw material supply phase is the most significant contributor, accounting for over 50% of the total global warming potential under both the IPCC AR6 and TRACI 2.2 methodologies. This impact is largely driven by the use of natural gypsum, which alone accounts for about 40% of CO_2-equivalent emissions within this phase. Raw material supply is also the dominant contributor accounting for 60–90% of the total impacts in most categories, with the exception of non-carcinogenics.

Transport to factory

The transport to factory phase makes a significant contribution to the non-carcinogenics category, particularly for products manufactured at the San Bernardino, CA and Houston, TX plants. In contrast, for products manufactured at the Stanhope, NJ facility, transportation to the building site has a higher impact in this category compared to transport to the factory. The primary driver of non-carcinogenic effects during this phase is the inbound transport of raw materials, which leads to emissions of nitrogen oxides (NO_x) and particulate matter, both known to cause potential non-carcinogenic health effects.

Manufacturing and transport to building site

The manufacturing and transport to building site phases contribute similarly to results. For global warming potential, their impacts range between 7% and 10%.

Installation

The installation phase has a minimal overall impact. Its contribution to global warming potential ranges between 5% and 7%. Among all other impact categories, A5 has an even lower contribution.

Embodied carbon

Embodied carbon can be defined as the cradle-to-gate (A1-A3) $IPCC_{Total}$ global warming potential impacts. The embodied carbon per declared unit of CAFCO® 300 AC is 3.64E+02 kg CO_2-eq for San Bernardino, 4.00E+02 kg CO_2-eq for Stanhope, and 3.29E+02 kg CO_2-eq for Houston.

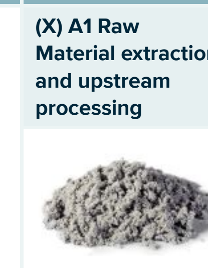
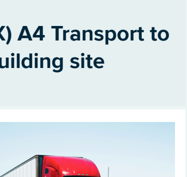
How we're making it greener

Isolatek International is committed to legal compliance and ethical business practices in all of our operations. Isolatek's vendors must act in accordance with the applicable statutory and international standards regarding environmental protection. Isolatek's vendors must minimize environmental pollution and make continuous improvements in environmental protection.

Isolatek's vendors must set up or use a reasonable environmental management system. In Isolatek's purchase arrangements, vendors must observe all applicable laws of their country and international standards, including but not limited to laws and standards relating to the environment, as well as health and safety.

See how we make it greener

LCA results

LIFE CYCLE STAGE	RAW MATERIAL SUPPLY	TRANSPORTATION	MANUFACTURING	TRANSPORTATION	INSTALLATION
Information modules: Included (X) | Excluded (MND)* *Modules B, C, and D are excluded.	**(X) A1 Raw Material extraction and upstream processing** 	**(X) A2 Transport to factory** 	**(X) A3 Manufacturing** 	**(X) A4 Transport to building site** 	**(X) A5 Installation** 

SM Single Score

Learn about SM Single Score results

A variation of 10 to 20% | A variation greater than 20%

Impacts per declared unit	1.68E+01 mPts	4.45E+00 mPts	2.29E+00 mPts	2.84E+00 mPts	2.89E-01 mPts
Materials or processes contributing >20% to total impacts in each life cycle stage	Raw extraction and upstream manufacturing.	Truck and rail transportation used to transport raw materials to manufacturing site.	Energy and ancillary materials required to make the passive fire protection product.	Truck and rail transportation used to transport finished products to construction site.	Energy and water used for installation.

TRACI v2.2 results per declared unit - CAFCO® 300 AC produced in San Bernardino, CA

LIFE CYCLE STAGE		RAW MATERIAL SUPPLY	TRANSPORT	MANUFACTURING	TRANSPORT TO BUILDING SITE	INSTALLATION
Ecological damage						
Impact category	Unit					
GWP, $IPCC_{Total}$	kg CO_2 eq	2.23E+02	1.08E+02	3.26E+01	4.16E+01	2.73E+01
GWP, $IPCC_{Biogenic}$	kg CO_2 eq	-8.92E+01	0.00E+00	-2.29E+01	0.00E+00	2.29E+01
GWP, $IPCC_{Fossil}$	kg CO_2 eq	3.12E+02	1.08E+02	5.56E+01	4.16E+01	4.36E+00
GWP, $IPCC_{Luluc}$	kg CO_2 eq	4.14E-01	5.72E-03	4.23E-02	2.21E-03	3.23E-03
GWP, $TRACI_{Total}$	kg CO_2 eq	2.23E+02	1.07E+02	3.16E+01	4.10E+01	3.16E+01
GWP, $TRACI_{Biogenic}$	kg CO_2 eq	-8.92E+01	0.00E+00	-2.29E+01	0.00E+00	2.29E+01
GWP, $TRACI_{Fossil}$	kg CO_2 eq	3.12E+02	1.07E+02	5.45E+01	4.10E+01	8.63E+00
Ozone depletion	kg CFC-11 eq	8.91E-06	1.46E-06	1.06E-06	5.59E-07	1.94E-08
Acidification	kg SO_2 eq	4.07E-07	4.12E-08	6.85E-08	1.60E-08	1.78E-08
Marine eutrophication	kg N eq	2.94E-01	8.71E-02	1.93E-02	3.22E-02	1.76E-03
Freshwater eutrophication	kg P eq	5.71E-03	3.38E-04	8.82E-04	1.32E-04	1.86E-04
Human health damage						
Impact category	Unit					
Smog	kg O_3 eq	2.38E+00	3.80E-01	1.38E-01	1.42E-01	1.37E-02
Respiratory effects	kg $PM_{2.5}$ eq	4.09E-05	1.63E-05	1.96E-06	6.32E-06	3.41E-07
Additional environmental information						
Impact category	Unit					
Carcinogenics	CTU_h	3.23E+01	1.04E+01	2.16E+00	3.83E+00	1.65E-01
Non-carcinogenics	CTU_h	1.61E+02	3.36E+02	8.49E+00	1.31E+02	1.05E+00
Ecotoxicity	CTU_e	4.14E-01	4.41E-02	1.59E-02	1.68E-02	9.26E-03

TRACI v2.2 results per declared unit - CAFCO® 300 AC produced in Stanhope, NJ

LIFE CYCLE STAGE		RAW MATERIAL SUPPLY	TRANSPORT	MANUFACTURING	TRANSPORT TO BUILDING SITE	INSTALLATION
Ecological damage						
Impact category	Unit					
GWP, $IPCC_{Total}$	kg CO_2 eq	3.24E+02	2.86E+01	4.77E+01	4.16E+01	2.63E+01
GWP, $IPCC_{Biogenic}$	kg CO_2 eq	-1.39E+00	0.00E+00	-2.19E+01	0.00E+00	2.19E+01
GWP, $IPCC_{Fossil}$	kg CO_2 eq	3.25E+02	2.86E+01	6.96E+01	4.16E+01	4.36E+00
GWP, $IPCC_{Luluc}$	kg CO_2 eq	4.23E-01	1.50E-03	4.09E-02	2.21E-03	3.23E-03
GWP, $TRACI_{Total}$	kg CO_2 eq	3.24E+02	2.82E+01	4.65E+01	4.10E+01	3.04E+01
GWP, $TRACI_{Biogenic}$	kg CO_2 eq	-1.39E+00	0.00E+00	-2.19E+01	0.00E+00	2.19E+01
GWP, $TRACI_{Fossil}$	kg CO_2 eq	3.25E+02	2.82E+01	6.84E+01	4.10E+01	8.43E+00
Ozone depletion	kg CFC-11 eq	9.13E-06	3.84E-07	2.16E-06	5.59E-07	1.93E-08
Acidification	kg SO_2 eq	4.20E-07	1.08E-08	7.48E-08	1.60E-08	1.76E-08
Marine eutrophication	kg N eq	3.07E-01	2.39E-02	2.28E-02	3.22E-02	1.74E-03
Freshwater eutrophication	kg P eq	5.87E-03	8.81E-05	9.28E-04	1.32E-04	1.84E-04
Human health damage						
Impact category	Unit					
Smog	kg O_3 eq	2.48E+00	1.03E-01	1.54E-01	1.42E-01	1.37E-02
Respiratory effects	kg $PM_{2.5}$ eq	4.19E-05	4.23E-06	1.92E-06	6.32E-06	3.36E-07
Additional environmental information						
Impact category	Unit					
Carcinogenics	CTU_h	3.38E+01	2.85E+00	2.58E+00	3.83E+00	1.64E-01
Non-carcinogenics	CTU_h	1.65E+02	8.74E+01	8.91E+00	1.31E+02	1.04E+00
Ecotoxicity	CTU_e	4.27E-01	1.17E-02	1.65E-02	1.68E-02	9.25E-03

TRACI v2.2 results per declared unit - CAFCO® 300 AC produced in Houston, TX

LIFE CYCLE STAGE		RAW MATERIAL SUPPLY	TRANSPORT	MANUFACTURING	TRANSPORT TO BUILDING SITE	INSTALLATION
Ecological damage						
Impact category	Unit					
GWP, $IPCC_{Total}$	kg CO_2 eq	2.33E+02	6.06E+01	3.51E+01	4.16E+01	2.52E+01
GWP, $IPCC_{Biogenic}$	kg CO_2 eq	-7.66E+01	0.00E+00	-2.08E+01	0.00E+00	2.08E+01
GWP, $IPCC_{Fossil}$	kg CO_2 eq	3.10E+02	6.06E+01	5.60E+01	4.16E+01	4.36E+00
GWP, $IPCC_{Luluc}$	kg CO_2 eq	4.25E-01	3.13E-03	3.86E-02	2.21E-03	3.22E-03
GWP, $TRACI_{Total}$	kg CO_2 eq	2.33E+02	5.98E+01	3.42E+01	4.10E+01	2.91E+01
GWP, $TRACI_{Biogenic}$	kg CO_2 eq	-7.66E+01	0.00E+00	-2.08E+01	0.00E+00	2.08E+01
GWP, $TRACI_{Fossil}$	kg CO_2 eq	3.10E+02	5.98E+01	5.51E+01	4.10E+01	8.23E+00
Ozone depletion	kg CFC-11 eq	9.21E-06	8.13E-07	9.41E-07	5.59E-07	1.92E-08
Acidification	kg SO_2 eq	4.09E-07	2.20E-08	6.83E-08	1.60E-08	1.75E-08
Marine eutrophication	kg N eq	2.81E-01	5.74E-02	1.95E-02	3.22E-02	1.72E-03
Freshwater eutrophication	kg P eq	5.77E-03	1.78E-04	9.30E-04	1.32E-04	1.82E-04
Human health damage						
Impact category	Unit					
Smog	kg O_3 eq	2.28E+00	2.41E-01	1.38E-01	1.42E-01	1.36E-02
Respiratory effects	kg $PM_{2.5}$ eq	4.15E-05	8.53E-06	1.74E-06	6.32E-06	3.30E-07
Additional environmental information						
Impact category	Unit					
Carcinogenics	CTU_h	3.08E+01	6.83E+00	2.19E+00	3.83E+00	1.63E-01
Non-carcinogenics	CTU_h	1.64E+02	1.76E+02	7.94E+00	1.31E+02	1.02E+00
Ecotoxicity	CTU_e	4.12E-01	2.53E-02	1.44E-02	1.68E-02	9.25E-03

Comparisons cannot be made between product-specific or industry average EPDs at the design stage of a project, before a building or construction works has been specified. Comparisons may be made between product-specific or industry average EPDs at the time of product purchase only when product or construction works 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 comparisons can be inaccurate and could lead to erroneous selection of materials or products that are higher-impact, at least in some impact categories.

References

LCA Background Report
LCA of Isolatek International Passive Fire Protection Products (public version), Isolatek 2025. Developed using the TRACI v2.2, IPCC 2021 AR6, CML, and Cumulative Energy Demand (LHV) impact assessment methodologies, SimaPro Craft 10.2 software, and ecoinvent v3.11 database.

ISO 14025, "Sustainability in buildings and civil engineering works -- Core rules for environmental product declarations of construction products and services"

ISO 21930:2007, "Sustainability in Building Construction — Environmental Declaration of Building Products" serves as the core PCR.

Smart EPD Part A product category rules for building and construction products and services; Version 1.2, March 2025. PCR review conducted by Jack Geibig (chair, jgeibig@ecoform.com); Terrie Boguski; and Hugues Imbeault-Tétreault.

Smart EPD Part B product category rules for Spray-applied Fire-Resistive Materials (SFRM); Version 4.0, January 2025. PCR review conducted by Thomas Gloria, PhD (chair, t.gloria@industrial-ecology.com); Karl Houser; and Jack Geibig.

Smart EPD General Program Instructions

Download PDF SM Transparency Report/ EPD

SM Transparency Reports (TR) are ISO 14025 Type III environmental declarations (EPD) that enable purchasers and users to compare the potential environmental performance of products on a life cycle basis. They are designed to present information transparently to make the limitations of comparability more understandable. Environmental declarations of products that conform to the same PCR and include the same life cycle stages, but are made by different manufacturers, may not sufficiently align to support direct comparisons. They therefore cannot be used as comparative assertions unless the conditions as defined in ISO 14025 Section 6.7.2. 'Requirements for Comparability' are satisfied. In order to support comparative assertions, this EPD meets all comparability requirements stated in ISO 14025:2006. However, differences in certain assumptions, data quality, and variability between LCA data sets may still exist. Example of variations: Different LCA software and background LCI datasets may lead to differences in results upstream or downstream of the life cycle stages declared. EPDs are only comparable if they conform with ISO 21930, this sub-category PCR, include all relevant information modules and are based on equivalent scenarios with respect to the construction works context. Some LCA impact categories and inventory items are still under development and can have high levels of uncertainty. The science supporting this additional environmental information is still under development and may have high levels of uncertainty that preclude international acceptance pending further development. Use caution when interpreting data in this category. To promote uniform guidance on the data collection, calculation, and reporting of results, the ACLCA methodology (ACLCA 2019) was used. The environmental impact results of products in this document are based on a declared unit and therefore do not provide sufficient information to establish comparisons. The results shall not be used for comparisons without knowledge of how the physical properties of the product impact the precise function at the construction level. The environmental impact results shall be converted to a functional unit basis before any comparison is attempted. 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.

Rating systems

The intent is to reward project teams for selecting products from manufacturers who have verified improved life-cycle environmental performance.

LEED BD+C: New Construction | v4 - LEED v4

Building product disclosure and optimization

Environmental product declarations

○ Industry-wide (generic) EPD	½ product
✔ Product-specific Type III EPD	1 product

LEED BD+C: New Construction | v4.1 - LEED v4.1

Building product disclosure and optimization

Environmental product declarations

○ Industry-wide (generic) EPD	1 product
✔ Product-specific Type III EPD	1.5 products

Green Globes for New Construction and Sustainable Interiors

Materials and resources

✔ NC 3.5.1.2 Path B: Prescriptive Path for Building Core and Shell

✔ NC 3.5.2.2 and SI 4.1.2 Path B: Prescriptive Path for Interior Fit-outs

BREEAM New Construction 2018

Mat 02 - Environmental impacts from construction products

Environmental Product Declarations (EPD)

○ Industry-average EPD	.5 points
○ Multi-product specific EPD	.75 points
✔ Product-specific EPD	1 point

LCA results & interpretation

CAFCO® 300 Series

CAFCO® 300 | CAFCO® 300 AC | **CAFCO® 300 HS** | CAFCO® 3000 | EPD additional content | Material health

Scope and summary

○ Cradle to gate ✔ **Cradle to gate with options** ○ Cradle to grave

Application

The CAFCO® 300 HS is a durable, gypsum based, wet mix, commercial density spray-applied fire resistive material (SFRM) designed to provide fire protection to concealed floor and roof assemblies, steel beams, columns, and joists in building construction projects.

Declared unit

1,000 kg of spray-applied fire-resistive material, packaging included.

Manufacturing activities

Products are manufactured by blending the specified bulking agent with a number of product-specific binders to achieve prescribed fire rating performance in the field. Finished goods are packaged in individual bags, stacked on pallets, and stretch wrapped before delivery to job sites.

Manufacturing data

Reporting period: January 2024 – December 2024
Locations: San Bernardino, CA; Stanhope, NJ; and Houston, TX

Distribution and installation scenarios

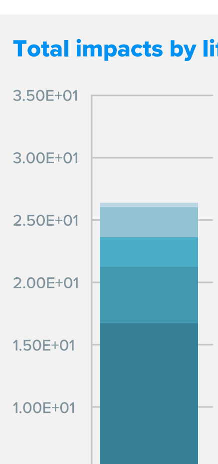
The product belongs to the CAFCO 300 SFRM subcategory, as the product density falls within the range of 15–20 pcf (240–320 kg/m^3). Distribution from the manufacturing facility to the construction site is assumed to be 500 km (311 miles) using a single unit truck with an empty backhaul. 1.377 m^3 of water and 6.3 kWh of electricity is assumed to be consumed during installation.

No gasoline or diesel-powered equipment is assumed to be used during installation. Therefore, the net calorific value (i.e., Lower Heating Value, LHV) of fuels is considered to be zero in A5.

Material composition by wt%

PART	WT%
Natural gypsum, w/o flue gas desulfurization gypsum	35-65%
Natural unexpanded vermiculite	20-45%
Calcium carbonate	5-12%
Recycled content (cellulose)	0-7%
Bentonite clay	4-6%

Total impacts by life cycle stage [mPts/decl unit]



LIFE CYCLE STAGE	MPTS/DECL. UNIT
Raw material supply	1.65E+01
Transport to factory	4.60E+00
Manufacturing	2.66E+00
Transport to building site	2.84E+00
Installation	3.06E-01
	Total impacts = 2.69E+01 mPts

What's causing the greatest impacts

All life cycle stages

The environmental impacts are primarily driven by the raw material supply phase. The raw material extraction and upstream processing stage dominates across all impact categories. Following this, the raw material transportation, manufacturing, and transport to the building site phases contribute comparable levels of impact. The installation stage results in the lowest overall impacts.

Raw material supply

The raw material supply phase is the most significant contributor, accounting for over 50% of the total global warming potential under both the IPCC AR6 and TRACI 2.2 methodologies. This impact is largely driven by the use of natural gypsum, which alone accounts for about 40% of CO_2-equivalent emissions within this phase. Raw material supply is also the dominant contributor accounting for 60–90% of the total impacts in most categories, with the exception of non-carcinogenics.

Transport to factory

The transport to factory phase makes a significant contribution to the non-carcinogenics category, particularly for products manufactured at the San Bernardino, CA and Houston, TX plants. In contrast, for products manufactured at the Stanhope, NJ facility, transportation to the building site has a higher impact in this category compared to transport to the factory. The primary driver of non-carcinogenic effects during this phase is the inbound transport of raw materials, which leads to emissions of nitrogen oxides (NO_x) and particulate matter, both known to cause potential non-carcinogenic health effects.

Manufacturing and transport to building site

The manufacturing and transport to building site phases contribute similarly to results. For global warming potential, their impacts range between 7% and 12%.

Installation

The installation phase has a minimal overall impact. Its contribution to global warming potential ranges between 5% and 9%. Among all other impact categories, A5 has an even lower contribution.

Embodied carbon

Embodied carbon can be defined as the cradle-to-gate (A1-A3) $IPCC_{Total}$ global warming potential impacts. The embodied carbon per declared unit of CAFCO® 300 HS is 3.64E+02 kg CO_2-eq for San Bernardino, 4.24E+02 kg CO_2-eq for Stanhope, and 3.46E+02 kg CO_2-eq for Houston.

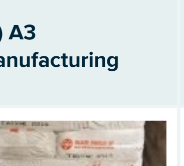
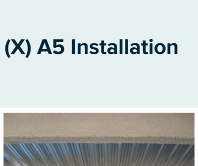
How we're making it greener

Isolatek International is committed to legal compliance and ethical business practices in all of our operations. Isolatek's vendors must act in accordance with the applicable statutory and international standards regarding environmental protection. Isolatek's vendors must minimize environmental pollution and make continuous improvements in environmental protection.

Isolatek's vendors must set up or use a reasonable environmental management system. In Isolatek's purchase arrangements, vendors must observe all applicable laws of their country and international standards, including but not limited to laws and standards relating to the environment, as well as health and safety.

See how we make it greener

LCA results

LIFE CYCLE STAGE	RAW MATERIAL SUPPLY	TRANSPORTATION	MANUFACTURING	TRANSPORTATION	INSTALLATION
Information modules: Included (X) | Excluded (MND)* *Modules B, C, and D are excluded.	**(X) A1 Raw Material extraction and upstream processing** 	**(X) A2 Transport to factory** 	**(X) A3 Manufacturing** 	**(X) A4 Transport to building site** 	**(X) A5 Installation** 

SM Single Score

Learn about SM Single Score results

A variation of 10 to 20% | A variation greater than 20%

Impacts per declared unit	1.65E+01 mPts	4.60E+00 mPts	2.66E+00 mPts	2.84E+00 mPts	3.06E-01 mPts
Materials or processes contributing >20% to total impacts in each life cycle stage	Raw extraction and upstream manufacturing.	Truck and rail transportation used to transport raw materials to manufacturing site.	Energy and ancillary materials required to make the passive fire protection product.	Truck and rail transportation used to transport finished products to construction site.	Energy and water used for installation.

TRACI v2.2 results per declared unit - CAFCO® 300 HS produced in San Bernardino, CA

LIFE CYCLE STAGE		RAW MATERIAL SUPPLY	TRANSPORT	MANUFACTURING	TRANSPORT TO BUILDING SITE	INSTALLATION
Ecological damage						
Impact category	Unit					
GWP, $IPCC_{Total}$	kg CO_2 eq	2.23E+02	1.08E+02	3.26E+01	4.16E+01	2.73E+01
GWP, $IPCC_{Biogenic}$	kg CO_2 eq	-8.92E+01	0.00E+00	-2.29E+01	0.00E+00	2.29E+01
GWP, $IPCC_{Fossil}$	kg CO_2 eq	3.12E+02	1.08E+02	5.56E+01	4.16E+01	4.36E+00
GWP, $IPCC_{Luluc}$	kg CO_2 eq	4.14E-01	5.72E-03	4.22E-02	2.21E-03	3.23E-03
GWP, $TRACI_{Total}$	kg CO_2 eq	2.23E+02	1.07E+02	3.16E+01	4.10E+01	3.16E+01
GWP, $TRACI_{Biogenic}$	kg CO_2 eq	-8.92E+01	0.00E+00	-2.29E+01	0.00E+00	2.29E+01
GWP, $TRACI_{Fossil}$	kg CO_2 eq	3.12E+02	1.07E+02	5.45E+01	4.10E+01	8.63E+00
Ozone depletion	kg CFC-11 eq	8.91E-06	1.46E-06	1.06E-06	5.59E-07	1.93E-08
Acidification	kg SO_2 eq	4.07E-07	4.12E-08	6.85E-08	1.60E-08	1.75E-08
Marine eutrophication	kg N eq	2.94E-01	8.71E-02	1.93E-02	3.22E-02	1.76E-03
Freshwater eutrophication	kg P eq	5.71E-03	3.38E-04	8.80E-04	1.32E-04	1.86E-04
Human health damage						
Impact category	Unit					
Smog	kg O_3 eq	2.38E+00	3.80E-01	1.38E-01	1.42E-01	1.37E-02
Respiratory effects	kg $PM_{2.5}$ eq	4.09E-05	1.63E-05	1.95E-06	6.32E-06	3.39E-07
Additional environmental information						
Impact category	Unit					
Carcinogenics	CTU_h	3.23E+01	1.04E+01	2.16E+00	3.83E+00	1.64E-01
Non-carcinogenics	CTU_h	1.61E+02	3.36E+02	8.48E+00	1.31E+02	1.05E+00
Ecotoxicity	CTU_e	4.14E-01	4.41E-02	1.59E-02	1.68E-02	9.26E-03

TRACI v2.2 results per declared unit - CAFCO® 300 HS produced in Stanhope, NJ

LIFE CYCLE STAGE		RAW MATERIAL SUPPLY	TRANSPORT	MANUFACTURING	TRANSPORT TO BUILDING SITE	INSTALLATION
Ecological damage						
Impact category	Unit					
GWP, $IPCC_{Total}$	kg CO_2 eq	3.25E+02	3.68E+01	6.27E+01	4.16E+01	3.90E+01
GWP, $IPCC_{Biogenic}$	kg CO_2 eq	-2.79E+00	0.00E+00	-3.46E+01	0.00E+00	3.46E+01
GWP, $IPCC_{Fossil}$	kg CO_2 eq	3.27E+02	3.68E+01	9.73E+01	4.16E+01	4.41E+00
GWP, $IPCC_{Luluc}$	kg CO_2 eq	3.16E-01	1.94E-03	6.44E-02	2.21E-03	3.26E-03
GWP, $TRACI_{Total}$	kg CO_2 eq	3.23E+02	3.63E+01	6.10E+01	4.10E+01	4.55E+01
GWP, $TRACI_{Biogenic}$	kg CO_2 eq	-2.79E+00	0.00E+00	-3.46E+01	0.00E+00	3.46E+01
GWP, $TRACI_{Fossil}$	kg CO_2 eq	3.26E+02	3.63E+01	9.56E+01	4.10E+01	1.09E+01
Ozone depletion	kg CFC-11 eq	6.66E-06	4.95E-07	3.18E-06	5.59E-07	2.02E-08
Acidification	kg SO_2 eq	3.72E-07	1.39E-08	1.17E-07	1.60E-08	1.96E-08
Marine eutrophication	kg N eq	3.54E-01	3.07E-02	3.32E-02	3.22E-02	2.00E-03
Freshwater eutrophication	kg P eq	4.91E-03	1.14E-04	1.46E-03	1.32E-04	2.09E-04
Human health damage						
Impact category	Unit					
Smog	kg O_3 eq	2.82E+00	1.33E-01	2.31E-01	1.42E-01	1.43E-02
Respiratory effects	kg $PM_{2.5}$ eq	3.34E-05	5.46E-06	2.94E-06	6.32E-06	4.01E-07
Additional environmental information						
Impact category	Unit					
Carcinogenics	CTU_h	4.00E+01	3.65E+00	3.73E+00	3.83E+00	1.72E-01
Non-carcinogenics	CTU_h	1.25E+02	1.13E+02	1.38E+01	1.31E+02	1.24E+00
Ecotoxicity	CTU_e	3.98E-01	1.51E-02	2.49E-02	1.68E-02	9.32E-03

TRACI v2.2 results per declared unit - CAFCO® 300 HS produced in Houston, TX

LIFE CYCLE STAGE		RAW MATERIAL SUPPLY	TRANSPORT	MANUFACTURING	TRANSPORT TO BUILDING SITE	INSTALLATION
Ecological damage						
Impact category	Unit					
GWP, $IPCC_{Total}$	kg CO_2 eq	2.52E+02	5.87E+01	3.49E+01	4.16E+01	2.56E+01
GWP, $IPCC_{Biogenic}$	kg CO_2 eq	-6.41E+01	0.00E+00	-2.13E+01	0.00E+00	2.13E+01
GWP, $IPCC_{Fossil}$	kg CO_2 eq	3.16E+02	5.87E+01	5.62E+01	4.16E+01	4.36E+00
GWP, $IPCC_{Luluc}$	kg CO_2 eq	4.34E-01	3.04E-03	3.95E-02	2.21E-03	3.22E-03
GWP, $TRACI_{Total}$	kg CO_2 eq	2.52E+02	5.79E+01	3.40E+01	4.10E+01	2.96E+01
GWP, $TRACI_{Biogenic}$	kg CO_2 eq	-6.41E+01	0.00E+00	-2.13E+01	0.00E+00	2.13E+01
GWP, $TRACI_{Fossil}$	kg CO_2 eq	3.16E+02	5.79E+01	5.53E+01	4.10E+01	8.30E+00
Ozone depletion	kg CFC-11 eq	9.40E-06	7.88E-07	9.43E-07	5.59E-07	1.93E-08
Acidification	kg SO_2 eq	4.17E-07	2.15E-08	6.92E-08	1.60E-08	1.75E-08
Marine eutrophication	kg N eq	2.86E-01	5.41E-02	1.97E-02	3.22E-02	1.73E-03
Freshwater eutrophication	kg P eq	5.89E-03	1.75E-04	9.46E-04	1.32E-04	1.83E-04
Human health damage						
Impact category	Unit					
Smog	kg O_3 eq	2.32E+00	2.29E-01	1.39E-01	1.42E-01	1.36E-02
Respiratory effects	kg $PM_{2.5}$ eq	4.23E-05	8.36E-06	1.76E-06	6.32E-06	3.33E-07
Additional environmental information						
Impact category	Unit					
Carcinogenics	CTU_h	3.14E+01	6.44E+00	2.21E+00	3.83E+00	1.64E-01
Non-carcinogenics	CTU_h	1.68E+02	1.72E+02	8.09E+00	1.31E+02	1.03E+00
Ecotoxicity	CTU_e	4.20E-01	2.44E-02	1.46E-02	1.68E-02	9.25E-03

Comparisons cannot be made between product-specific or industry average EPDs at the design stage of a project, before a building or construction works has been specified. Comparisons may be made between product-specific or industry average EPDs at the time of product purchase only when product or construction works 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 comparisons can be inaccurate and could lead to erroneous selection of materials or products that are higher-impact, at least in some impact categories.

References

LCA Background Report
LCA of Isolatek International Passive Fire Protection Products (public version), Isolatek 2025. Developed using the TRACI v2.2, IPCC 2021 AR6, CML, and Cumulative Energy Demand (LHV) impact assessment methodologies, SimaPro Craft 10.2 software, and ecoinvent v3.11 database.

ISO 14025, "Sustainability in buildings and civil engineering works -- Core rules for environmental product declarations of construction products and services"

ISO 21930:2007, "Sustainability in Building Construction — Environmental Declaration of Building Products" serves as the core PCR.

Smart EPD Part A product category rules for building and construction products and services; Version 1.2, March 2025. PCR review conducted by Jack Geibig (chair, jgeibig@ecoform.com); Terrie Boguski; and Hugues Imbeault-Tétreault.

Smart EPD Part B product category rules for Spray-applied Fire-Resistive Materials (SFRM); Version 4.0, January 2025. PCR review conducted by Thomas Gloria, PhD (chair, t.gloria@industrial-ecology.com); Karl Houser; and Jack Geibig.

Smart EPD General Program Instructions

Download PDF SM Transparency Report/ EPD

SM Transparency Reports (TR) are ISO 14025 Type III environmental declarations (EPD) that enable purchasers and users to compare the potential environmental performance of products on a life cycle basis. They are designed to present information transparently to make the limitations of comparability more understandable. Environmental declarations of products that conform to the same PCR and include the same life cycle stages, but are made by different manufacturers, may not sufficiently align to support direct comparisons. They therefore cannot be used as comparative assertions unless the conditions as defined in ISO 14025 Section 6.7.2. 'Requirements for Comparability' are satisfied. In order to support comparative assertions, this EPD meets all comparability requirements stated in ISO 14025:2006. However, differences in certain assumptions, data quality, and variability between LCA data sets may still exist. Example of variations: Different LCA software and background LCI datasets may lead to differences in results upstream or downstream of the life cycle stages declared. EPDs are only comparable if they conform with ISO 21930, this sub-category PCR, include all relevant information modules and are based on equivalent scenarios with respect to the construction works context. Some LCA impact categories and inventory items are still under development and can have high levels of uncertainty. The science supporting this additional environmental information is still under development and may have high levels of uncertainty that preclude international acceptance pending further development. Use caution when interpreting data in this category. To promote uniform guidance on the data collection, calculation, and reporting of results, the ACLCA methodology (ACLCA 2019) was used. The environmental impact results of products in this document are based on a declared unit and therefore do not provide sufficient information to establish comparisons. The results shall not be used for comparisons without knowledge of how the physical properties of the product impact the precise function at the construction level. The environmental impact results shall be converted to a functional unit basis before any comparison is attempted. 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.

Rating systems

The intent is to reward project teams for selecting products from manufacturers who have verified improved life-cycle environmental performance.

LEED BD+C: New Construction | v4 - LEED v4

Building product disclosure and optimization

Environmental product declarations

○ Industry-wide (generic) EPD	½ product
✔ Product-specific Type III EPD	1 product

LEED BD+C: New Construction | v4.1 - LEED v4.1

Building product disclosure and optimization

Environmental product declarations

○ Industry-wide (generic) EPD	1 product
✔ Product-specific Type III EPD	1.5 products

Green Globes for New Construction and Sustainable Interiors

Materials and resources

✔ NC 3.5.1.2 Path B: Prescriptive Path for Building Core and Shell

✔ NC 3.5.2.2 and SI 4.1.2 Path B: Prescriptive Path for Interior Fit-outs

BREEAM New Construction 2018

Mat 02 - Environmental impacts from construction products

Environmental Product Declarations (EPD)

○ Industry-average EPD	.5 points
○ Multi-product specific EPD	.75 points
✔ Product-specific EPD	1 point

LCA results & interpretation

CAFCO® 300 Series

Scope and summary

○ Cradle to gate ✔ **Cradle to gate with options** ○ Cradle to grave

Application

The CAFCO® 3000 is a durable, gypsum based, wet mix, commercial density spray-applied fire resistive material (SFRM) designed to provide fire protection to concealed floor and roof assemblies, steel beams, columns, and joists in building construction projects.

Declared unit

1,000 kg of spray-applied fire-resistive material, packaging included.

Manufacturing activities

Products are manufactured by blending the specified bulking agent with a number of product-specific binders to achieve prescribed fire rating performance in the field. Finished goods are packaged in individual bags, stacked on pallets, and stretch wrapped before delivery to job sites.

Manufacturing data

Reporting period: January 2024 – December 2024
Locations: San Bernardino, CA; Stanhope, NJ; and Houston, TX

Distribution and installation scenarios

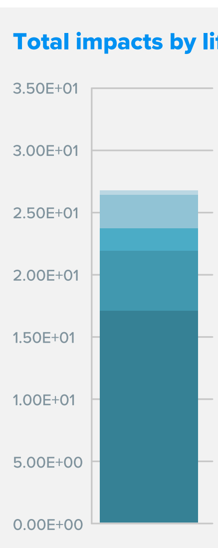
The product belongs to the CAFCO 300 SFRM subcategory, as the product density falls within the range of 15–20 pcf (240–320 kg/m^3). Distribution from the manufacturing facility to the construction site is assumed to be 500 km (311 miles) using a single unit truck with an empty backhaul. 1.377 m^3 of water and 6.3 kWh of electricity is assumed to be consumed during installation.

No gasoline or diesel-powered equipment is assumed to be used during installation. Therefore, the net calorific value (i.e., Lower Heating Value, LHV) of fuels is considered to be zero in A5.

Material composition by wt%

PART	WT%
Natural gypsum, w/o flue gas desulfurization gypsum	50-65%
Natural unexpanded vermiculite	20-30%
Calcium carbonate	5-8%
Recycled content (cellulose)	0-7%
Bentonite clay	4-6%

Total impacts by life cycle stage [mPts/decl unit]



LIFE CYCLE STAGE	MPTS/DECL. UNIT
Raw material supply	1.69E+01
Transport to factory	4.42E+00
Manufacturing	2.01E+00
Transport to building site	2.84E+00
Installation	2.90E-01
Total impacts = 2.65E+01 mPts	

What's causing the greatest impacts

All life cycle stages

The environmental impacts are primarily driven by the raw material supply phase. The raw material extraction and upstream processing stage dominates across all impact categories. Following this, the raw material transportation, manufacturing, and transport to the building site phases contribute comparable levels of impact. The installation stage results in the lowest overall impacts.

Raw material supply

The raw material supply phase is the most significant contributor, accounting for over 50% of the total global warming potential under both the IPCC AR6 and TRACI 2.2 methodologies. This impact is largely driven by the use of natural gypsum, which alone accounts for about 40% of CO_2-equivalent emissions within this phase. Raw material supply is also the dominant contributor accounting for 60–90% of the total impacts in most categories, with the exception of non-carcinogenics.

Transport to factory

The transport to factory phase makes a significant contribution to the non-carcinogenics category, particularly for products manufactured at the San Bernardino, CA and Houston, TX plants. In contrast, for products manufactured at the Stanhope, NJ facility, transportation to the building site has a higher impact in this category compared to transport to the factory. The primary driver of non-carcinogenic effects during this phase is the inbound transport of raw materials, which leads to emissions of nitrogen oxides (NO_x) and particulate matter, both known to cause potential non-carcinogenic health effects.

Manufacturing and transport to building site

The manufacturing and transport to building site phases contribute similarly to results. For global warming potential, their impacts range between 4% and 10%.

Installation

The installation phase has a minimal overall impact. Its contribution to global warming potential ranges between 5% and 7%. Among all other impact categories, A5 has an even lower contribution.

Embodied carbon

Embodied carbon can be defined as the cradle-to-gate (A1-A3) IPCC$_{Total}$ global warming potential impacts. The embodied carbon per declared unit of CAFCO® 3000 is is 3.55E+02 kg CO_2-eq for San Bernardino, 3.78E+02 kg CO_2-eq for Stanhope, and 3.54E+02 kg CO_2-eq for Houston.

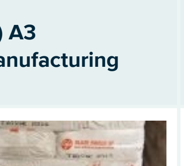
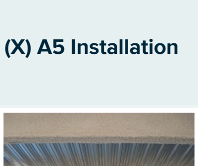
How we're making it greener

Isolatek International is committed to legal compliance and ethical business practices in all of our operations. Isolatek's vendors must act in accordance with the applicable statutory and international standards regarding environmental protection. Isolatek's vendors must minimize environmental pollution and make continuous improvements in environmental protection.

Isolatek's vendors must set up or use a reasonable environmental management system. In Isolatek's purchase arrangements, vendors must observe all applicable laws of their country and international standards, including but not limited to laws and standards relating to the environment, as well as health and safety.

See how we make it greener

LCA results

LIFE CYCLE STAGE	RAW MATERIAL SUPPLY	TRANSPORTATION	MANUFACTURING	TRANSPORTATION	INSTALLATION
Information modules: **Included (X)** | Excluded (MND)* *Modules B, C, and D are excluded.	**(X) A1 Raw Material extraction and upstream processing**	**(X) A2 Transport to factory**	**(X) A3 Manufacturing**	**(X) A4 Transport to building site**	**(X) A5 Installation**
					

SM Single Score

Learn about SM Single Score results

A variation of 10 to 20% | A variation greater than 20%

Impacts per declared unit	1.69E+01 mPts	4.42E+00m Pts	2.01E+00 mPts	2.84E+00 mPts	2.90E-01 mPts
Materials or processes contributing >20% to total impacts in each life cycle stage	Raw extraction and upstream manufacturing.	Truck and rail transportation used to transport raw materials to manufacturing site.	Energy and ancillary materials required to make the passive fire protection product.	Truck and rail transportation used to transport finished products to construction site.	Energy and water used for installation.

TRACI v2.2 results per declared unit - CAFCO® 3000 produced in San Bernardino, CA

LIFE CYCLE STAGE		RAW MATERIAL SUPPLY	TRANSPORT	MANUFACTURING	TRANSPORT TO BUILDING SITE	INSTALLATION
Ecological damage						
Impact category	Unit					
GWP, IPCC$_{Total}$	kg CO_2 eq	2.23E+02	1.08E+02	2.37E+01	4.16E+01	2.73E+01
GWP, IPCC$_{Biogenic}$	kg CO_2 eq	-8.92E+01	0.00E+00	-2.29E+01	0.00E+00	2.29E+01
GWP, IPCC$_{Fossil}$	kg CO_2 eq	3.12E+02	1.08E+02	4.66E+01	4.16E+01	4.36E+00
GWP, IPCC$_{Luluc}$	kg CO_2 eq	4.14E-01	5.72E-03	4.20E-02	2.21E-03	3.23E-03
GWP, TRACI$_{Total}$	kg CO_2 eq	2.23E+02	1.07E+02	2.28E+01	4.10E+01	3.16E+01
GWP, TRACI$_{Biogenic}$	kg CO_2 eq	-8.92E+01	0.00E+00	-2.29E+01	0.00E+00	2.29E+01
GWP, TRACI$_{Fossil}$	kg CO_2 eq	3.12E+02	1.07E+02	4.57E+01	4.10E+01	8.63E+00
Ozone depletion	kg CFC-11 eq	8.91E-06	1.46E-06	9.00E-07	5.59E-07	1.94E-08
Acidification	kg SO_2 eq	4.07E-07	4.12E-08	6.77E-08	1.60E-08	1.78E-08
Marine eutrophication	kg N eq	2.94E-01	8.71E-02	1.78E-02	3.22E-02	1.76E-03
Freshwater eutrophication	kg P eq	5.71E-03	3.38E-04	8.78E-04	1.32E-04	1.86E-04
Human health damage						
Impact category	Unit					
Smog	kg O_3 eq	2.38E+00	3.80E-01	1.31E-01	1.42E-01	1.37E-02
Respiratory effects	kg $PM_{2.5}$ eq	4.09E-05	1.63E-05	1.92E-06	6.32E-06	3.41E-07
Additional environmental information						
Impact category	Unit					
Carcinogenics	CTU_h	3.23E+01	1.04E+01	1.98E+00	3.83E+00	1.65E-01
Non-carcinogenics	CTU_h	1.61E+02	3.36E+02	8.34E+00	1.31E+02	1.05E+00
Ecotoxicity	CTU_e	4.14E-01	4.41E-02	1.54E-02	1.68E-02	9.26E-03

TRACI v2.2 results per declared unit - CAFCO® 3000 produced in Stanhope, NJ

LIFE CYCLE STAGE		RAW MATERIAL SUPPLY	TRANSPORT	MANUFACTURING	TRANSPORT TO BUILDING SITE	INSTALLATION
Ecological damage						
Impact category	Unit					
GWP, IPCC$_{Total}$	kg CO_2 eq	3.29E+02	2.88E+01	2.06E+01	4.16E+01	2.67E+01
GWP, IPCC$_{Biogenic}$	kg CO_2 eq	-1.39E+00	0.00E+00	-2.23E+01	0.00E+00	2.23E+01
GWP, IPCC$_{Fossil}$	kg CO_2 eq	3.30E+02	2.88E+01	4.29E+01	4.16E+01	4.36E+00
GWP, IPCC$_{Luluc}$	kg CO_2 eq	4.30E-01	1.52E-03	4.09E-02	2.21E-03	3.23E-03
GWP, TRACI$_{Total}$	kg CO_2 eq	3.29E+02	2.84E+01	1.99E+01	4.10E+01	3.08E+01
GWP, TRACI$_{Biogenic}$	kg CO_2 eq	-1.39E+00	0.00E+00	-2.23E+01	0.00E+00	2.23E+01
GWP, TRACI$_{Fossil}$	kg CO_2 eq	3.30E+02	2.84E+01	4.22E+01	4.10E+01	8.50E+00
Ozone depletion	kg CFC-11 eq	9.28E-06	3.88E-07	1.69E-06	5.59E-07	1.93E-08
Acidification	kg SO_2 eq	4.26E-07	1.09E-08	7.30E-08	1.60E-08	1.77E-08
Marine eutrophication	kg N eq	3.11E-01	2.37E-02	1.86E-02	3.22E-02	1.75E-03
Freshwater eutrophication	kg P eq	5.96E-03	8.94E-05	9.30E-04	1.32E-04	1.85E-04
Human health damage						
Impact category	Unit					
Smog	kg O_3 eq	2.51E+00	1.03E-01	1.36E-01	1.42E-01	1.37E-02
Respiratory effects	kg $PM_{2.5}$ eq	4.25E-05	4.29E-06	1.81E-06	6.32E-06	3.38E-07
Additional environmental information						
Impact category	Unit					
Carcinogenics	CTU_h	3.43E+01	2.82E+00	2.08E+00	3.83E+00	1.64E-01
Non-carcinogenics	CTU_h	1.67E+02	8.88E+01	8.59E+00	1.31E+02	1.04E+00
Ecotoxicity	CTU_e	4.34E-01	1.18E-02	1.51E-02	1.68E-02	9.25E-03

TRACI v2.2 results per declared unit - CAFCO® 3000 produced in Houston, TX

LIFE CYCLE STAGE		RAW MATERIAL SUPPLY	TRANSPORT	MANUFACTURING	TRANSPORT TO BUILDING SITE	INSTALLATION
Ecological damage						
Impact category	Unit					
GWP, IPCC$_{Total}$	kg CO_2 eq	2.52E+02	5.87E+01	4.38E+01	4.16E+01	2.56E+01
GWP, IPCC$_{Biogenic}$	kg CO_2 eq	-6.41E+01	0.00E+00	-2.13E+01	0.00E+00	2.13E+01
GWP, IPCC$_{Fossil}$	kg CO_2 eq	3.16E+02	5.87E+01	6.51E+01	4.16E+01	4.36E+00
GWP, IPCC$_{Luluc}$	kg CO_2 eq	4.34E-01	3.04E-03	3.97E-02	2.21E-03	3.22E-03
GWP, TRACI$_{Total}$	kg CO_2 eq	2.52E+02	5.79E+01	4.28E+01	4.10E+01	2.96E+01
GWP, TRACI$_{Biogenic}$	kg CO_2 eq	-6.41E+01	0.00E+00	-2.13E+01	0.00E+00	2.13E+01
GWP, TRACI$_{Fossil}$	kg CO_2 eq	3.16E+02	5.79E+01	6.40E+01	4.10E+01	8.30E+00
Ozone depletion	kg CFC-11 eq	9.40E-06	7.88E-07	1.10E-06	5.59E-07	1.93E-08
Acidification	kg SO_2 eq	4.17E-07	2.15E-08	6.99E-08	1.60E-08	1.75E-08
Marine eutrophication	kg N eq	2.86E-01	5.41E-02	2.12E-02	3.22E-02	1.73E-03
Freshwater eutrophication	kg P eq	5.89E-03	1.75E-04	9.49E-04	1.32E-04	1.83E-04
Human health damage						
Impact category	Unit					
Smog	kg O_3 eq	2.32E+00	2.29E-01	1.45E-01	1.42E-01	1.36E-02
Respiratory effects	kg $PM_{2.5}$ eq	4.23E-05	8.36E-06	1.80E-06	6.32E-06	3.33E-07
Additional environmental information						
Impact category	Unit					
Carcinogenics	CTU_h	3.14E+01	6.44E+00	2.39E+00	3.83E+00	1.64E-01
Non-carcinogenics	CTU_h	1.68E+02	1.72E+02	8.23E+00	1.31E+02	1.03E+00
Ecotoxicity	CTU_e	4.20E-01	2.44E-02	1.51E-02	1.68E-02	9.25E-03

Comparisons cannot be made between product-specific or industry average EPDs at the design stage of a project, before a building or construction works has been specified. Comparisons may be made between product-specific or industry average EPDs at the time of product purchase only when product or construction works 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 comparisons can be inaccurate and could lead to erroneous selection of materials or products that are higher-impact, at least in some impact categories.

References

LCA Background Report
LCA of Isolatek International Passive Fire Protection Products (public version), Isolatek 2025. Developed using the TRACI v2.2, IPCC 2021 AR6, CML, and Cumulative Energy Demand (LHV) impact assessment methodologies, SimaPro Craft 10.2 software, and ecoinvent v3.11 database.

ISO 14025, "Sustainability in buildings and civil engineering works -- Core rules for environmental product declarations of construction products and services"

ISO 21930:2007, "Sustainability in Building Construction — Environmental Declaration of Building Products" serves as the core PCR.

Smart EPD Part A product category rules for building and construction products and services; Version 1.2, March 2025. PCR review conducted by Jack Geibig (chair, jgeibig@ecoform.com); Terrie Boguski; and Hugues Imbeault-Tétreault.

Smart EPD Part B product category rules for Spray-applied Fire-Resistive Materials (SFRM); Version 4.0, January 2025. PCR review conducted by Thomas Gloria, PhD (chair, t.gloria@industrial-ecology.com); Karl Houser; and Jack Geibig.

Smart EPD General Program Instructions

Download PDF SM Transparency Report/ EPD

SM Transparency Reports (TR) are ISO 14025 Type III environmental declarations (EPD) that enable purchasers and users to compare the potential environmental performance of products on a life cycle basis. They are designed to present information transparently to make the limitations of comparability more understandable. Environmental declarations of products that conform to the same PCR and include the same life cycle stages, but are made by different manufacturers, may not sufficiently align to support direct comparisons. They therefore cannot be used as comparative assertions unless the conditions as defined in ISO 14025 Section 6.7.2. 'Requirements for Comparability' are satisfied. In order to support comparative assertions, this EPD meets all comparability requirements stated in ISO 14025:2006. However, differences in certain assumptions, data quality, and variability between LCA data sets may still exist. Example of variations: Different LCA software and background LCI datasets may lead to differences in results upstream or downstream of the life cycle stages declared. EPDs are only comparable if they conform with ISO 21930, this sub-category PCR, include all relevant information modules and are based on equivalent scenarios with respect to the construction works context. Some LCA impact categories and inventory items are still under development and can have high levels of uncertainty. The science supporting this additional environmental information is still under development and may have high levels of uncertainty that preclude international acceptance pending further development. Use caution when interpreting data in this category. To promote uniform guidance on the data collection, calculation, and reporting of results, the ACLCA methodology (ACLCA 2019) was used. The environmental impact results of products in this document are based on a declared unit and therefore do not provide sufficient information to establish comparisons. The results shall not be used for comparisons without knowledge of how the physical properties of the product impact the precise function at the construction level. The environmental impact results shall be converted to a functional unit basis before any comparison is attempted. 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.

Rating systems

The intent is to reward project teams for selecting products from manufacturers who have verified improved life-cycle environmental performance.

LEED BD+C: New Construction | v4 - LEED v4

Building product disclosure and optimization

Environmental product declarations

○ Industry-wide (generic) EPD	½ product
✔ Product-specific Type III EPD	1 product

LEED BD+C: New Construction | v4.1 - LEED v4.1

Building product disclosure and optimization

Environmental product declarations

○ Industry-wide (generic) EPD	1 product
✔ Product-specific Type III EPD	1.5 products

Green Globes for New Construction and Sustainable Interiors

Materials and resources

✔ NC 3.5.1.2 Path B: Prescriptive Path for Building Core and Shell

✔ NC 3.5.2.2 and SI 4.1.2 Path B: Prescriptive Path for Interior Fit-outs

BREEAM New Construction 2018

Mat 02 - Environmental impacts from construction products

Environmental Product Declarations (EPD)

○ Industry-average EPD	.5 points
○ Multi-product specific EPD	.75 points
✔ Product-specific EPD	1 point

EPD additional content

CAFCO® 300 Series

CAFCO® 300 | CAFCO® 300 AC | CAFCO® 300 HS | CAFCO® 3000 | EPD additional content | Material health

Data

Background This product-specific and facility-specific declaration was created by collecting annual production data. For products manufactured at multiple facilities, primary data was collected separately from each location and modeled individually. All product types are manufactured by blending the specified bulking agent with a number of product-specific binders to achieve prescribed fire rating performance in the field. Finished goods are packaged in individual bags, stacked on pallets, and stretch wrapped before delivery to job sites.

Allocation The model used in this report ensures that the sum of the allocated inputs and outputs of a unit process are equal to the inputs and outputs of the unit process before allocation. This means that no double counting or omissions of inputs or outputs through allocation is occurring. The manufacturing facilities included in this study all produce multiple products. Since only facility level data were available, allocation among a facility's co-products was necessary to determine the inputs and output flows associated with each product. Allocation of materials and energy was done on a mass basis for all products. Allocation of transportation was based on the weight of the outputs of products from each facility.

Cut-off criteria for the inclusion of mass and energy flows are 1% of renewable primary resource (energy) usage, 1% nonrenewable primary resource (energy) usage, 1% of the total mass input of that unit process, and 1% of environmental impacts. The total of neglected input flows per module does not exceed 5% of energy usage, mass, and environmental impacts. The only exceptions to these criteria are substances with hazardous and toxic properties, which must be listed even when the given process unit is under the cut-off criterion of 1% of the total mass. No renewable energy was used in production beyond that accounted for in the eGRID data sets for the three facilities, and no energy was recovered. No known flows are deliberately excluded from this declaration, and no substances considered to be hazardous or toxic according to the Toxics Release Inventory (TRI) program or local regulations are present in the products. Biogenic carbon is included in reported results. Therefore, these criteria have been met.

Quality The precision of the data and geographic representativeness are considered to be high. The isolatek personnel provided detailed bills of materials, and facility managers provided utility information for the manufacturing locations. Temporal and technological representativeness are considered to be high. The raw material transportation distances were calculated based on the raw material supplier addresses. The data included is considered complete. The LCA model includes 100% of raw material and energy flows. The consistency of the model is considered high. The bills of materials provided by isolatek personnel were developed for multiple internal departments and are maintained regularly.

Background LCI data sets Modeling choices were applied consistently. Except for eGRID electricity data sets, all background LCI data sets used in the study were sourced from ecoinvent v3.11.

Raw material supply [A1]

Foreground data	Background data set	Reference year	Geography
Natural gypsum	Gypsum plasterboard (RoW) gypsum plasterboard production | Cut-off, U	2023	Rest of World (RoW)
Plaster of Paris	Gypsum plasterboard (RoW) gypsum plasterboard production | Cut-off, U	2023	Rest of World (RoW)
Mica	Expanded vermiculite (RoW) expanded vermiculite production | Cut-off, U	2023	Rest of World (RoW)
Vermiculite	Expanded vermiculite (RoW) expanded vermiculite production | Cut-off, U	2023	Rest of World (RoW)
Calcium Carbonate	Calcium carbonate, precipitated (RoW) calcium carbonate production, precipitated | Cut-off, U	2023	Rest of World (RoW)
Feldspar	Feldspar (RoW) feldspar production | Cut-off, U	2023	Rest of World (RoW)
Bentonite Clay	Bentonite (RoW) bentonite quarry operation | Cut-off, U	2023	Rest of World (RoW)
Portland Cement Type 1L10	Cement, Portland (RoW) cement production, Portland | Cut-off, U	2023	Rest of World (RoW)
Recycled Cellulose	Empty data set	N/A	N/A
Recycled Lewy Sag	Blast furnace slag, Recycled Content cut-off GLO	2023	Global

Transport to factory & building site [A2&A4]

Foreground data	Background data set	Reference year	Geography
Bulk tanker	transport, freight, lorry >32 metric ton, EURO4 RoW	2024	Rest of World (RoW)
Intermodal freight	transport, freight, lorry >32 metric ton, EURO4 RoW	2024	Rest of World (RoW)
53' Dry van	transport, freight, lorry >32 metric ton, EURO4 RoW	2024	Rest of World (RoW)
48' Rail container	transport, freight train (US) market for transport, freight train | Cut-off, U	2024	The U.S

Manufacturing [A3]

Foreground data	Background data set	Reference year	Geography
Manufacturing electricity	Electricity mix, eGrid subregion, ERCT/US U	2023	The U.S.
Manufacturing electricity	Electricity mix, eGrid subregion, CAMX/US U	2023	The U.S.
Manufacturing electricity	Electricity mix, eGrid subregion, RFCW/US U	2023	The U.S.
Manufacturing electricity	Electricity mix, eGrid subregion, RFCE/US U	2023	The U.S.
Natural gas for heat production	market for heat, district or industrial, natural gas RoW	2024	Rest of World (RoW)
Coke for heat production	Heat, central or small-scale, other than natural gas (RoW) heat production, hard coal coke, stove 5-15kW | Cut-off, U	2024	Rest of World (RoW)
Road transport for collecting municipal waste	Municipal waste collection service by 21 metric ton lorry (RoW) municipal waste collection service by 21 metric ton lorry | Cut-off, U	2023	Rest of World (RoW)
Landfilled municipal waste	Process-specific burdens, residual material landfill (RoW) market for process-specific burdens, residual material landfill | Cut-off, U	2024	Rest of World (RoW)
Waste paper incineration	Waste paperboard (GLO) treatment of waste paperboard, municipal incineration | Cut-off, U	2024	Global
Waste paper landfill	Waste paperboard (RoW) treatment of waste paperboard, sanitary landfill | Cut-off, U	2024	Rest of World (RoW)
Waste plastic incineration	Waste plastic, mixture (RoW) treatment of waste plastic, mixture, municipal incineration | Cut-off, U	2024	Rest of World (RoW)
Waste plastic landfill	Waste plastic, mixture (RoW) treatment of waste plastic, mixture, sanitary landfill | Cut-off, U	2024	Rest of World (RoW)
Kraft paper bag	Kraft paper (RoW) kraft paper production | Cut-off, U	2023	Rest of World (RoW)
Plastic bag	Packaging film, low density polyethylene (RoW) production | Corrseq, U	2021	Rest of World (RoW)

Installation [A5]

Foreground data	Background data set	Reference year	Geography
Water use	Tap water (RoW) market for tap water | Cut-off, U	2024	Rest of World (RoW)
Electricity use	Electricity, medium voltage (US) market group for electricity, medium voltage | Cut-off, U	2024	The U.S

Major system boundary exclusions

- Construction of major capital equipment
- Human labor and employee transport
- Disposal of packaging materials associated with final product
- Building operational energy & water use not associated with final product

Major assumptions and limitations

- US background data were used whenever possible, with rest-of-world or global data substituted as proxies as necessary.
- 1,000 kg of SFRM is the declared unit in the study, although it should be noted that the studied products are not typically produced to this size.
- LCA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins, or risks.
- The EPD owner has sole ownership, liability, and responsibility for the EPD.

Scenarios and additional technical information

Manufacturing [A3] The manufacturing process assumes a scrap rate of 2% (20 kg) per declared unit (1,000 kg). Prior to delivery to job sites, the finished goods are individually packaged in kraft paper bags.

Kraft paper packaging consumption in manufacturing per declared unit	San Bernardino, CA	Stanhope, NJ	Houston, TX
CAFCO® 300 - Kraft paper packaging (kg)	13.93	14.55	12.84
CAFCO® 300 AC - Kraft paper packaging (kg)	14.22	13.59	12.91
CAFCO® 300 HS - Kraft paper packaging (kg)	14.22	21.46	13.18
CAFCO® 3000 - Kraft paper packaging (kg)	14.22	13.82	13.18

Packaging transport and waste treatment scenarios per manufacturing facility	San Bernardino, CA	Stanhope, NJ	Houston, TX
Vehicle for packaging transport	53' dry van trailers		
Shipping distance for packaging material (km)	832	3,515	2,189
Waste disposal	100% landfill		
Vehicle for waste collection and transport	Garbage truck		
Waste management transport distance (km)	13	43	7

Transport scenario [A4]

Name	Value	Unit
Fuel type	Diesel	
Vehicle type	Truck	
Transportation distance		
Transport distance	500	km
Capacity utilization	50	%
Capacity utilization volume factor (factor: =1 or <1 or ≥ 1 for compressed or nested packaging products)	1	-
Gross density		
CAFCO® 300	240	kg/m³
CAFCO® 300 AC	240	kg/m³
CAFCO® 300 HS	240	kg/m³
CAFCO® 3000	240	kg/m³

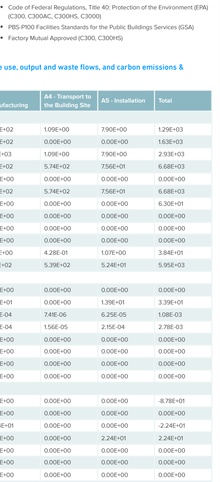
Installation scenario [A5] Kraft paper wastes are generated during product installation as listed per declared unit in the table below.

Product name and facility location	Waste packaging (kg)	Packaging waste disposal assumptions specified by route (kg)	Biogenic carbon packaging (kg)
CAFCO® 300 San Bernardino, CA	13.93	Recycling 9.01; Landfill 3.96; Incineration 0.96	22.47
CAFCO® 300 Stanhope, NJ	14.55	Recycling 9.41 kg; Landfill 4.13 kg; Incineration 1.0 kg	23.47
CAFCO® 300 Houston, TX	12.84	Recycling 8.31; Landfill 3.65; Incineration 0.89	20.72
CAFCO® 300 AC San Bernardino, CA	14.22	Recycling 9.2; Landfill 4.04; Incineration 0.98	22.94
CAFCO® 300 AC Stanhope, NJ	13.59	Recycling 8.79; Landfill 3.86; Incineration 0.94	21.93
CAFCO® 300 AC Houston, TX	12.91	Recycling 8.35; Landfill 3.67; Incineration 0.89	20.83
CAFCO® 300 HS San Bernardino, CA	14.22	Recycling 9.2; Landfill 4.04; Incineration 0.98	22.94
CAFCO® 300 HS Stanhope, NJ	21.46	Recycling 13.88; Landfill 6.09; Incineration 1.48	34.62
CAFCO® 300 HS Houston, TX	13.18	Recycling 8.53; Landfill 3.74; Incineration 0.91	21.26
CAFCO® 3000 San Bernardino, CA	14.22	Recycling 9.2; Landfill 4.04; Incineration 0.98	22.94
CAFCO® 3000 Stanhope, NJ	13.82	Recycling 8.94; Landfill 3.92; Incineration 0.95	22.3
CAFCO® 3000 Houston, TX	13.18	Recycling 8.53; Landfill 3.74; Incineration 0.91	21.26

Disposal [C4] While the impacts from product disposal are out of the scope of this cradle-to-gate with installation study, *ISO 21930:2017* requires that biogenic carbon emissions associated with packaging and product disposal be separately reported.

Product	Facility location	Biogenic carbon emissions associated with disposal (C4) (kg CO_2)
CAFCO® 300	San Bernardino, CA	87.8
CAFCO® 300	Stanhope, NJ	1.39
CAFCO® 300	Houston, TX	76.6
CAFCO® 300 AC	San Bernardino, CA	89.2
CAFCO® 300 AC	Stanhope, NJ	1.37
CAFCO® 300 AC	Houston, TX	76.6
CAFCO® 300 HS	San Bernardino, CA	89.2
CAFCO® 300 HS	Stanhope, NJ	2.79
CAFCO® 300 HS	Houston, TX	64.1
CAFCO® 3000	San Bernardino, CA	89.2
CAFCO® 3000	Stanhope, NJ	1.39
CAFCO® 3000	Houston, TX	64.1

Flow diagram



Technical properties

- MasterSpec®, Section 078100 - APPLIED FIREPROOFING (AIA) (C300, C300AC, C300HS, C3000)
- MasterFormat™ 2014, Section 07 81 00 Applied Fireproofing (CSC, CSI) (C300, C300AC, C300HS, C3000)
- United Facilities Guide Specification, UFGS 07 81 00
- Spray-Applied Fireproofing (USACE, NAVFAC, AFCEC, NASA) (C300, C300AC, C300HS, C3000)
- Applied Fireproofing (AI) (C300, C300AC, C300HS, C3000)
- Code of Federal Regulations, Title 40: Protection of the Environment (EPA) (C300, C300AC, C300HS, C3000)
- PBS-P100 Facilities Standards for the Public Buildings Services (GSA)
- Factory Mutual Approved (C300, C300HS)

CAFCO® 300 - San Bernardino, CA: LCI indicator results for resource use, output and waste flows, and carbon emissions & removals per declared unit

Indicator	Unit	A1 - Raw Material supply	A2 - Transport	A3 - Manufacturing	A4 - Transport to the Building Site	A5 - Installation	Total
Resource use indicators							
RPR_E	MJ, NCV	7.21E+02	2.79E+00	5.59E+02	1.09E+00	7.90E+00	1.29E+03
RPR_M	MJ, NCV	8.31E+02	0.00E+00	8.03E+02	0.00E+00	0.00E+00	1.63E+03
RPR_{tot}	MJ, NCV	1.55E+03	2.79E+00	1.36E+03	1.09E+00	7.90E+00	2.93E+03
$NRPR_E$	MJ, NCV	3.60E+03	1.48E+03	9.49E+02	5.74E+02	7.56E+01	6.68E+03
$NRPR_M$	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
$NRPR_{tot}$	MJ, NCV	3.60E+03	1.48E+03	9.49E+02	5.74E+02	7.56E+01	6.68E+03
SM	kg	6.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.30E+01
RSF	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RE	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	3.21E+01	1.09E+00	3.74E+00	4.28E-01	1.07E+00	3.84E+01
ADP_{fossil}	MJ, NCV	3.20E+03	1.38E+03	7.76E+02	5.39E+02	5.24E+01	5.95E+03
Output flows and waste category indicators							
HWD	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NHWD	kg	0.00E+00	0.00E+00	2.00E+01	0.00E+00	1.39E+01	3.39E+01
HLRW	kg	6.99E-04	1.90E-05	2.93E-04	7.41E-06	6.25E-05	1.08E-03
ILLRW	kg	1.85E-03	3.99E-05	6.55E-04	1.56E-05	2.15E-04	2.78E-03
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbon emissions and removals							
BCRP	kg CO_2	-8.78E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-8.78E+01
BCEP	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCRK	kg CO_2	0.00E+00	0.00E+00	-2.24E+01	0.00E+00	0.00E+00	-2.24E+01
BCEK	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.24E+01	2.24E+01
CBCEW	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCE	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCR	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CWNR	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CAFCO® 300 - Stanhope, NJ: LCI indicator results for resource use, output and waste flows, and carbon emissions & removals per declared unit

Indicator	Unit	A1 - Raw Material supply	A2 - Transport	A3 - Manufacturing	A4 - Transport to the Building Site	A5 - Installation	Total
Resource use indicators							
RPR_E	MJ, NCV	8.04E+02	7.78E-01	4.90E+02	1.09E+00	7.90E+00	1.30E+03
RPR_M	MJ, NCV	1.32E+01	0.00E+00	8.41E+02	0.00E+00	0.00E+00	8.54E+02
RPR_{tot}	MJ, NCV	8.17E+02	7.78E-01	1.33E+03	1.09E+00	7.90E+00	2.16E+03
$NRPR_E$	MJ, NCV	4.08E+03	4.1E+02	1.43E+03	5.74E+02	7.57E+01	6.57E+03
$NRPR_M$	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
$NRPR_{tot}$	MJ, NCV	4.08E+03	4.1E+02	1.43E+03	5.74E+02	7.57E+01	6.57E+03
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00
RSF	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RE	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	3.44E+01	3.10E-01	4.39E+00	4.33E-01	1.06E+00	4.06E+01
ADP_{fossil}	MJ, NCV	3.62E+03	3.85E+02	1.03E+03	5.39E+02	5.25E+01	5.63E+03
Output flows and waste category indicators							
HWD	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NHWD	kg	0.00E+00	0.00E+00	2.00E+01	0.00E+00	1.46E+01	3.46E+01
HLRW	kg	7.85E-04	5.30E-06	8.86E-04	7.41E-06	6.25E-05	1.75E-03
ILLRW	kg	2.07E-03	1.11E-05	1.98E-03	1.56E-05	2.15E-04	4.29E-03
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbon emissions and removals							
BCRP	kg CO_2	-1.39E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.39E+00
BCEP	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCRK	kg CO_2	0.00E+00	0.00E+00	-2.35E+01	0.00E+00	0.00E+00	-2.35E+01
BCEK	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.35E+01	2.35E+01
CBCEW	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCE	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCR	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CWNR	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CAFCO® 300 - Houston, TX: LCI indicator results for resource use, output and waste flows, and carbon emissions & removals per declared unit

Indicator	Unit	A1 - Raw Material supply	A2 - Transport	A3 - Manufacturing	A4 - Transport to the Building Site	A5 - Installation	Total
Resource use indicators							
RPR_E	MJ, NCV	7.48E+02	1.58E+00	4.59E+02	1.09E+00	7.90E+00	1.22E+03
RPR_M	MJ, NCV	7.25E+02	0.00E+00	7.42E+02	0.00E+00	0.00E+00	1.47E+03
RPR_{tot}	MJ, NCV	1.47E+03	1.58E+00	1.20E+03	1.09E+00	7.90E+00	2.68E+03
$NRPR_E$	MJ, NCV	3.66E+03	8.40E+02	1.10E+03	5.74E+02	7.55E+01	6.24E+03
$NRPR_M$	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
$NRPR_{tot}$	MJ, NCV	3.66E+03	8.40E+02	1.10E+03	5.74E+02	7.55E+01	6.24E+03
SM	kg	5.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.50E+01
RSF	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RE	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	3.31E+01	6.06E-01	4.00E+00	4.36E-01	1.06E+00	3.92E+01
ADP_{fossil}	MJ, NCV	3.24E+03	7.88E+02	9.36E+02	5.39E+02	5.23E+01	5.56E+03
Output flows and waste category indicators							
HWD	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NHWD	kg	0.00E+00	0.00E+00	2.00E+01	0.00E+00	1.28E+01	3.28E+01
HLRW	kg	7.29E-04	1.08E-05	2.04E-04	7.41E-06	6.25E-05	1.01E-03
ILLRW	kg	1.93E-03	2.26E-05	4.58E-04	1.56E-05	2.15E-04	2.64E-03
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbon emissions and removals							
BCRP	kg CO_2	-7.66E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-7.66E+01
BCEP	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCRK	kg CO_2	0.00E+00	0.00E+00	-2.07E+01	0.00E+00	0.00E+00	-2.07E+01
BCEK	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E+01	2.07E+01
CBCEW	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCE	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCR	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CWNR	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CAFCO® 300 AC - San Bernardino, CA: LCI indicator results for resource use, output and waste flows, and carbon emissions & removals per declared unit

Indicator	Unit	A1 - Raw Material supply	A2 - Transport	A3 - Manufacturing	A4 - Transport to the Building Site	A5 - Installation	Total
Resource use indicators							
RPR_E	MJ, NCV	7.36E+02	2.83E+00	5.73E+02	1.09E+00	7.90E+00	1.32E+03
RPR_M	MJ, NCV	8.44E+02	0.00E+00	8.21E+02	0.00E+00	0.00E+00	1.67E+03
RPR_{tot}	MJ, NCV	1.58E+03	2.83E+00	1.39E+03	1.09E+00	7.90E+00	2.99E+03
$NRPR_E$	MJ, NCV	3.67E+03	1.50E+03	9.69E+02	5.74E+02	7.57E+01	6.79E+03
$NRPR_M$	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
$NRPR_{tot}$	MJ, NCV	3.67E+03	1.50E+03	9.69E+02	5.74E+02	7.57E+01	6.79E+03
SM	kg	6.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.40E+01
RSF	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RE	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	3.24E+01	1.09E+00	3.75E+00	4.21E-01	1.06E+00	3.87E+01
ADP_{fossil}	MJ, NCV	3.26E+03	1.40E+03	7.91E+02	5.39E+02	5.25E+01	6.05E+03
Output flows and waste category indicators							
HWD	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NHWD	kg	0.00E+00	0.00E+00	2.00E+01	0.00E+00	1.42E+01	3.42E+01
HLRW	kg	7.14E-04	1.93E-05	3.03E-04	7.41E-06	6.25E-05	1.11E-03
ILLRW	kg	1.89E-03	4.05E-05	6.76E-04	1.56E-05	2.15E-04	2.83E-03
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbon emissions and removals							
BCRP	kg CO_2	-8.92E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-8.92E+01
BCEP	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCRK	kg CO_2	0.00E+00	0.00E+00	-2.29E+01	0.00E+00	0.00E+00	-2.29E+01
BCEK	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E+01	2.29E+01
CBCEW	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCE	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCR	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CWNR	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CAFCO® 300 AC - Stanhope, NJ: LCI indicator results for resource use, output and waste flows, and carbon emissions & removals per declared unit

Indicator	Unit	A1 - Raw Material supply	A2 - Transport	A3 - Manufacturing	A4 - Transport to the Building Site	A5 - Installation	Total
Resource use indicators							
RPR_E	MJ, NCV	7.52E+02	7.45E-01	4.59E+02	1.09E+00	7.90E+00	1.22E+03
RPR_M	MJ, NCV	1.32E+01	0.00E+00	7.85E+02	0.00E+00	0.00E+00	7.98E+02
RPR_{tot}	MJ, NCV	7.65E+02	7.45E-01	1.24E+03	1.09E+00	7.90E+00	2.02E+03
$NRPR_E$	MJ, NCV	3.84E+03	3.95E+02	1.40E+03	5.74E+02	7.56E+01	6.28E+03
$NRPR_M$	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
$NRPR_{tot}$	MJ, NCV	3.84E+03	3.95E+02	1.40E+03	5.74E+02	7.56E+01	6.28E+03
SM	kg	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00
RSF	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RE	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	3.33E+01	2.94E-01	4.24E+00	4.35E-01	1.06E+00	3.93E+01
ADP_{fossil}	MJ, NCV	3.41E+03	3.70E+02	1.01E+03	5.39E+02	5.24E+01	5.38E+03
Output flows and waste category indicators							
HWD	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NHWD	kg	0.00E+00	0.00E+00	2.00E+01	0.00E+00	1.36E+01	3.36E+01
HLRW	kg	7.34E-04	5.09E-06	8.45E-04	7.41E-06	6.25E-05	1.65E-03
ILLRW	kg	1.94E-03	1.07E-05	1.89E-03	1.56E-05	2.15E-04	4.07E-03
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbon emissions and removals							
BCRP	kg CO_2	-1.39E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.39E+00
BCEP	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCRK	kg CO_2	0.00E+00	0.00E+00	-2.19E+01	0.00E+00	0.00E+00	-2.19E+01
BCEK	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.19E+01	2.19E+01
CBCEW	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCE	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCR	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CWNR	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CAFCO® 300 AC - Houston, TX: LCI indicator results for resource use, output and waste flows, and carbon emissions & removals per declared unit

Indicator	Unit	A1 - Raw Material supply	A2 - Transport	A3 - Manufacturing	A4 - Transport to the Building Site	A5 - Installation	Total
Resource use indicators							
RPR_E	MJ, NCV	7.52E+02	1.57E+00	4.61E+02	1.09E+00	7.90E+00	1.22E+03
RPR_M	MJ, NCV	7.25E+02	0.00E+00	7.46E+02	0.00E+00	0.00E+00	1.47E+03
RPR_{tot}	MJ, NCV	1.48E+03	1.57E+00	1.21E+03	1.09E+00	7.90E+00	2.69E+03
$NRPR_E$	MJ, NCV	3.68E+03	8.37E+02	9.38E+02	5.74E+02	7.55E+01	6.10E+03
$NRPR_M$	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
$NRPR_{tot}$	MJ, NCV	3.68E+03	8.37E+02	9.38E+02	5.74E+02	7.55E+01	6.10E+03
SM	kg	5.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.50E+01
RSF	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RE	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	3.33E+01	6.07E-01	3.84E+00	4.36E-01	1.06E+00	3.92E+01
ADP_{fossil}	MJ, NCV	3.26E+03	7.86E+02	7.94E+02	5.39E+02	5.23E+01	5.43E+03
Output flows and waste category indicators							
HWD	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NHWD	kg	0.00E+00	0.00E+00	2.00E+01	0.00E+00	1.29E+01	3.29E+01
HLRW	kg	7.33E-04	1.08E-05	2.04E-04	7.41E-06	6.25E-05	1.02E-03
ILLRW	kg	1.94E-03	2.25E-05	4.56E-04	1.56E-05	2.15E-04	2.65E-03
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbon emissions and removals							
BCRP	kg CO_2	-7.66E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-7.66E+01
BCEP	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCRK	kg CO_2	0.00E+00	0.00E+00	-2.08E+01	0.00E+00	0.00E+00	-2.08E+01
BCEK	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+01	2.08E+01
CBCEW	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCE	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCR	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CWNR	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CAFCO® 300 HS - San Bernardino, CA: LCI indicator results for resource use, output and waste flows, and carbon emissions & removals per declared unit

Indicator	Unit	A1 - Raw Material supply	A2 - Transport	A3 - Manufacturing	A4 - Transport to the Building Site	A5 - Installation	Total
Resource use indicators							
RPR_E	MJ, NCV	7.36E+02	2.83E+00	5.72E+02	1.09E+00	7.90E+00	1.32E+03
RPR_M	MJ, NCV	8.44E+02	0.00E+00	8.21E+02	0.00E+00	0.00E+00	1.67E+03
RPR_{tot}	MJ, NCV	1.58E+03	2.83E+00	1.39E+03	1.09E+00	7.90E+00	2.99E+03
$NRPR_E$	MJ, NCV	3.67E+03	1.50E+03	9.69E+02	5.74E+02	7.56E+01	6.79E+03
$NRPR_M$	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
$NRPR_{tot}$	MJ, NCV	3.67E+03	1.50E+03	9.69E+02	5.74E+02	7.56E+01	6.79E+03
SM	kg	6.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.40E+01
RSF	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RE	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	3.24E+01	1.09E+00	3.74E+00	4.21E-01	1.06E+00	3.87E+01
ADP_{fossil}	MJ, NCV	3.26E+03	1.40E+03	7.91E+02	5.39E+02	5.24E+01	6.05E+03
Output flows and waste category indicators							
HWD	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NHWD	kg	0.00E+00	0.00E+00	2.00E+01	0.00E+00	1.42E+01	3.42E+01
HLRW	kg	7.14E-04	1.93E-05	3.03E-04	7.41E-06	6.25E-05	1.11E-03
ILLRW	kg	1.89E-03	4.05E-05	6.76E-04	1.56E-05	2.15E-04	2.83E-03
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbon emissions and removals							
BCRP	kg CO_2	-8.92E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-8.92E+01
BCEP	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCRK	kg CO_2	0.00E+00	0.00E+00	-2.29E+01	0.00E+00	0.00E+00	-2.29E+01
BCEK	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E+01	2.29E+01
CBCEW	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCE	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCR	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CWNR	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CAFCO® 300 HS - Stanhope, NJ: LCI indicator results for resource use, output and waste flows, and carbon emissions & removals per declared unit

Indicator	Unit	A1 - Raw Material supply	A2 - Transport	A3 - Manufacturing	A4 - Transport to the Building Site	A5 - Installation	Total
Resource use indicators							
RPR_E	MJ, NCV	5.67E+02	9.62E-01	7.25E+02	1.09E+00	7.92E+00	1.30E+03
RPR_M	MJ, NCV	2.64E+01	0.00E+00	1.24E+03	0.00E+00	0.00E+00	1.27E+03
RPR_{tot}	MJ, NCV	5.94E+02	9.62E-01	1.96E+03	1.09E+00	7.92E+00	2.57E+03
$NRPR_E$	MJ, NCV	3.80E+03	5.09E+02	1.98E+03	5.74E+02	7.64E+01	6.94E+03
$NRPR_M$	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
$NRPR_{tot}$	MJ, NCV	3.80E+03	5.09E+02	1.98E+03	5.74E+02	7.64E+01	6.94E+03
SM	kg	2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E+00
RSF	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RE	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	3.02E+01	4.25E-01	6.37E+00	4.86E-01	1.16E+00	3.87E+01
ADP_{fossil}	MJ, NCV	3.41E+03	4.78E+02	1.39E+03	5.39E+02	5.31E+01	5.88E+03
Output flows and waste category indicators							
HWD	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NHWD	kg	0.00E+00	0.00E+00	2.00E+01	0.00E+00	2.15E+01	4.15E+01
HLRW	kg	5.76E-04	6.57E-06	1.33E-03	7.41E-06	6.26E-05	1.98E-03
ILLRW	kg	1.49E-03	1.38E-05	2.96E-03	1.56E-05	2.15E-04	4.70E-03
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbon emissions and removals							
BCRP	kg CO_2	-2.79E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.79E+00

BCEP	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCRK	kg CO_2	0.00E+00	0.00E+00	-3.46E+01	0.00E+00	0.00E+00	-3.46E+01
BCEK	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.46E+01	3.46E+01
CBCEW	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCE	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCR	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CWNR	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CAFCO® 300 HS - Houston, TX: LCI indicator results for resource use, output and waste flows, and carbon emissions & removals per declared unit

Indicator	Unit	A1 - Raw Material supply	A2 - Transport	A3 - Manufacturing	A4 - Transport to the Building Site	A5 - Installation	Total
Resource use indicators							
RPR$_E$	MJ, NCV	7.68E+02	1.52E+00	4.70E+02	1.09E+00	7.90E+00	1.25E+03
RPR$_M$	MJ, NCV	6.07E+02	0.00E+00	7.61E+02	0.00E+00	0.00E+00	1.37E+03
RPR$_{total}$	MJ, NCV	1.37E+03	1.52E+00	1.23E+03	1.09E+00	7.90E+00	2.62E+03
NRPR$_E$	MJ, NCV	3.75E+03	8.11E+02	9.40E+02	5.74E+02	7.56E+01	6.15E+03
NRPR$_M$	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRPR$_{total}$	MJ, NCV	3.75E+03	8.11E+02	9.40E+02	5.74E+02	7.56E+01	6.15E+03
SM	kg	4.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.60E+01
RSF	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RE	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	3.38E+01	5.91E-01	3.88E+00	4.35E-01	1.06E+00	3.98E+01
ADP$_{fossil}$	MJ, NCV	3.32E+03	7.61E+02	7.96E+02	5.39E+02	5.24E+01	5.47E+03
Output flows and waste category indicators							
HWD	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NHWD	kg	0.00E+00	0.00E+00	2.00E+01	0.00E+00	1.32E+01	3.32E+01
HLRW	kg	7.48E-04	1.05E-05	2.05E-04	7.41E-06	6.25E-05	1.03E-03
ILLRW	kg	1.98E-03	2.18E-05	4.58E-04	1.56E-05	2.15E-04	2.69E-03
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbon emissions and removals							
BCRP	kg CO_2	-6.41E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-6.41E+01
BCEP	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCRK	kg CO_2	0.00E+00	0.00E+00	-2.13E+01	0.00E+00	0.00E+00	-2.13E+01
BCEK	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E+01	2.13E+01
CBCEW	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCE	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCR	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CWNR	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CAFCO® 3000 - San Bernardino, CA: LCI indicator results for resource use, output and waste flows, and carbon emissions & removals per declared unit

Indicator	Unit	A1 - Raw Material supply	A2 - Transport	A3 - Manufacturing	A4 - Transport to the Building Site	A5 - Installation	Total
Resource use indicators							
RPR$_E$	MJ, NCV	7.36E+02	2.83E+00	5.72E+02	1.09E+00	7.90E+00	1.32E+03
RPR$_M$	MJ, NCV	8.44E+02	0.00E+00	8.21E+02	0.00E+00	0.00E+00	1.67E+03
RPR$_{total}$	MJ, NCV	1.58E+03	2.83E+00	1.39E+03	1.09E+00	7.90E+00	2.99E+03
NRPR$_E$	MJ, NCV	3.67E+03	1.50E+03	8.10E+02	5.74E+02	7.57E+01	6.63E+03
NRPR$_M$	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRPR$_{total}$	MJ, NCV	3.67E+03	1.50E+03	8.10E+02	5.74E+02	7.57E+01	6.63E+03
SM	kg	6.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.40E+01
RSF	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RE	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	3.24E+01	1.09E+00	3.57E+00	4.21E-01	1.06E+00	3.86E+01
ADP$_{fossil}$	MJ, NCV	3.26E+03	1.40E+03	6.48E+02	5.39E+02	5.25E+01	5.90E+03
Output flows and waste category indicators							
HWD	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NHWD	kg	0.00E+00	0.00E+00	2.00E+01	0.00E+00	1.42E+01	3.42E+01
HLRW	kg	7.14E-04	1.93E-05	3.02E-04	7.41E-06	6.25E-05	1.10E-03
ILLRW	kg	1.89E-03	4.05E-05	6.73E-04	1.56E-05	2.15E-04	2.83E-03
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbon emissions and removals							
BCRP	kg CO_2	-8.92E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-8.92E+01
BCEP	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCRK	kg CO_2	0.00E+00	0.00E+00	-2.29E+01	0.00E+00	0.00E+00	-2.29E+01
BCEK	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E+01	2.29E+01
CBCEW	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCE	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCR	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CWNR	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CAFCO® 3000 - Stanhope, NJ: LCI indicator results for resource use, output and waste flows, and carbon emissions & removals per declared unit

Indicator	Unit	A1 - Raw Material supply	A2 - Transport	A3 - Manufacturing	A4 - Transport to the Building Site	A5 - Installation	Total
Resource use indicators							
RPR$_E$	MJ, NCV	7.64E+02	7.53E-01	4.65E+02	1.09E+00	7.90E+00	1.24E+03
RPR$_M$	MJ, NCV	1.32E+01	0.00E+00	7.98E+02	0.00E+00	0.00E+00	8.12E+02
RPR$_{total}$	MJ, NCV	7.78E+02	7.53E-01	1.26E+03	1.09E+00	7.90E+00	2.05E+03
NRPR$_E$	MJ, NCV	3.89E+03	3.98E+02	9.20E+02	5.74E+02	7.56E+01	5.86E+03
NRPR$_M$	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRPR$_{total}$	MJ, NCV	3.89E+03	3.98E+02	9.20E+02	5.74E+02	7.56E+01	5.86E+03
SM	kg	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00
RSF	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RE	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	3.38E+01	2.98E-01	3.76E+00	4.35E-01	1.06E+00	3.94E+01
ADP$_{fossil}$	MJ, NCV	3.46E+03	3.74E+02	5.82E+02	5.39E+02	5.24E+01	5.01E+03
Output flows and waste category indicators							
HWD	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NHWD	kg	0.00E+00	0.00E+00	2.00E+01	0.00E+00	1.38E+01	3.38E+01
HLRW	kg	7.46E-04	5.14E-06	8.43E-04	7.41E-06	6.25E-05	1.66E-03
ILLRW	kg	1.97E-03	1.08E-05	1.88E-03	1.56E-05	2.15E-04	4.09E-03
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbon emissions and removals							
BCRP	kg CO_2	-1.39E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.39E+00
BCEP	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCRK	kg CO_2	0.00E+00	0.00E+00	-2.23E+01	0.00E+00	0.00E+00	-2.23E+01
BCEK	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.23E+01	2.23E+01
CBCEW	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCE	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCR	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CWNR	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CAFCO® 3000 - Houston, TX: LCI indicator results for resource use, output and waste flows, and carbon emissions & removals per declared unit

Indicator	Unit	A1 - Raw Material supply	A2 - Transport	A3 - Manufacturing	A4 - Transport to the Building Site	A5 - Installation	Total
Resource use indicators							
RPR$_E$	MJ, NCV	7.68E+02	1.52E+00	4.71E+02	1.09E+00	7.90E+00	1.25E+03
RPR$_M$	MJ, NCV	6.07E+02	0.00E+00	7.61E+02	0.00E+00	0.00E+00	1.37E+03
RPR$_{total}$	MJ, NCV	1.37E+03	1.52E+00	1.23E+03	1.09E+00	7.90E+00	2.62E+03
NRPR$_E$	MJ, NCV	3.75E+03	8.11E+02	1.10E+03	5.74E+02	7.56E+01	6.31E+03
NRPR$_M$	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRPR$_{total}$	MJ, NCV	3.75E+03	8.11E+02	1.10E+03	5.74E+02	7.56E+01	6.31E+03
SM	kg	4.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.60E+01
RSF	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RE	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	3.38E+01	5.91E-01	4.05E+00	4.35E-01	1.06E+00	4.00E+01
ADP$_{fossil}$	MJ, NCV	3.32E+03	7.61E+02	9.39E+02	5.39E+02	5.24E+01	5.61E+03
Output flows and waste category indicators							
HWD	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NHWD	kg	0.00E+00	0.00E+00	2.00E+01	0.00E+00	1.32E+01	3.32E+01
HLRW	kg	7.48E-04	1.05E-05	2.06E-04	7.41E-06	6.25E-05	1.03E-03
ILLRW	kg	1.98E-03	2.18E-05	4.61E-04	1.56E-05	2.15E-04	2.69E-03
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbon emissions and removals							
BCRP	kg CO_2	-6.41E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-6.41E+01
BCEP	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCRK	kg CO_2	0.00E+00	0.00E+00	-2.13E+01	0.00E+00	0.00E+00	-2.13E+01
BCEK	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E+01	2.13E+01
CBCEW	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCE	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCR	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CWNR	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Acronyms used for resource use, output and waste flows, and carbon emissions & removals

Indicators	Acronyms used
Resource use indicators	
Renewable primary energy used as energy carrier (fuel)	RPR$_E$
Renewable primary resources with energy content used as material	RPR$_M$
Total use of renewable primary resources with energy content	RPR$_{total}$
Non-renewable primary resources used as an energy carrier (fuel)	NRPR$_E$
Non-renewable primary resources with energy content used as material	NRPR$_M$
Total use of non-renewable primary resources with energy content	NRPR$_{total}$
Secondary materials	SM
Renewable secondary fuels	RSF
Non-renewable secondary fuels	NRSF
Recovered energy	RE
Use of net fresh water resources	FW
Abiotic depletion potential for fossil resources	ADP$_{fossil}$
Output flows and waste category indicators	
Hazardous waste disposed	HWD
Non-hazardous waste disposed	NHWD
High-level radioactive waste, conditioned, to final repository	HLRW
Intermediate- and low-level radioactive waste, conditioned, to final repository	ILLRW
Components for re-use	CRU
Materials for recycling	MR
Materials for energy recovery	MER
Exported energy	EE
Carbon emissions and removals	
Biogenic Carbon Removal from Product	BCRP
Biogenic Carbon Emission from Product	BCEP
Biogenic Carbon Removal from Packaging	BCRK
Biogenic Carbon Emission from Packaging	BCEK
Biogenic Carbon Emission from Combustion of Waste from Renewable Sources Used in Production Processes	BCEW
Calcination Carbon Emissions	CCE
Carbonation Carbon Removals	CCR
Carbon Emissions from Combustion of Waste from Non-Renewable Sources used in Production Processes	CWNR

SM Transparency Report (EPD)™ + Material Health Overview™

VERIFICATION LCA

3rd-party reviewed ✓

Transparency Report (EPD)

3rd-party verified ✓

Validity: 08/12/25 – 08/11/30
ISL – 08122025 – 001

MATERIAL HEALTH Material evaluation

Self-declared ✓

This environmental product declaration (EPD) was externally verified by Jack Geibig (Ecoform) according to ISO 21930:2017; ISO 14025:2006; Smart EPD® Part A; and Smart EPD Part B for spray-applied fire-resistive materials (SFRM).

In accordance with ISO 14044 and the reference PCR, this life cycle assessment was conducted by Sustainable Minds and reviewed by [Reviewer Name] (Ecoform).

Ecoform, LLC
11903 Black Road
Knoxville, TN 37932
(865) 850-1883
www.ecoform.com

SUMMARY
Reference PCR
Smart EPD® Part B PCR for Spray-Applied Fire-Resistive Materials, 1000-003, v4.0, 01/25 – 01/30

System boundaries
Cradle to gate (A1 – A3) with installation (A4, A5)

Market of applicability
North America

Declared unit: 1,000 kg

LCIA methodology: GWP 100 IPCC 2021 (AR6), TRACI 2.2

LCA software; LCI database
SimaPro Craft 10.2; ecoinvent 3.11, US-EI 2.2

LCA conducted by: Sustainable Minds

Public LCA:
LCA of Isolatek Passive Fire Protection Products

EPD holder:
Isolatek International

Isolatek International
14231 Seaway Rd., Suite 1003
Gulfport, MS 3950
www.isolatek.com
800 631 9600

Contact us

© 2025 | The SM Transparency Report [EPD]™ Program is operated by Sustainable Minds® (www.sustainableminds.com) | Privacy policy

LCA & material health results & interpretation

CAFCO® 300 Series

CAFCO® 300 | CAFCO® 300 AC | CAFCO® 300 HS | CAFCO® 3000 | EPD additional content | Material health

Assessment scope and results

Declare™

Inventory threshold: 100 ppm

Declare level:
The Declare product database and label are used to select products that meet the LBC's stringent materials requirements, streamlining the materials specification and certification process.

- LBC Red List Free
- LBC Red List Approved
- Declared

Click the label to see the full declaration.

CAFCO 300 SERIES


Declare.
CAFCO 300 Series
Isolatek International
Final Assembly: Stanhope, New Jersey, USA; Houston, Texas, USA; San Bernardino, California, USA
Life Expectancy: Life of Structure Year(s)
End of Life Options: Landfill (100%)
Ingredients:
CAFCO 300 / 300AC / 300HS: Calcium Sulfate, Hemihydrate; Vermiculite; Bentonite Clay; Calcium Carbonate; Cellulose; Quartz
Living Building Challenge Criteria: Compliant
I-13 Red List:
■ LBC Red List Free
□ LBC Red List Approved
□ Declared
% Disclosed: 100% at 100ppm
VOC Content: 0 g/L
I-10 Interior Performance: CDPH Standard Method v1.2-2017
I-14 Responsible Sourcing: Not Applicable
ISK-0004
EXP. 01 JAN 2025
Original Issue Date: 2017
MANUFACTURER RESPONSIBLE FOR LABEL ACCURACY
INTERNATIONAL LIVING FUTURE INSTITUTE™ living-future.org/declare

CAFCO 3000


Declare.
CAFCO 3000
Isolatek International
Final Assembly: Stanhope, New Jersey, USA; Houston, Texas, USA; San Bernardino, California, USA
Life Expectancy: Life of structure Year(s)
End of Life Options: Landfill (100%)
Ingredients:
CAFCO 3000: Calcium Sulfate, Hemihydrate; Vermiculite; Bentonite Clay; Cellulose; Calcium Carbonate; Quartz; SOLID GLASS and GLASS / MINERAL FIBER
Living Building Challenge Criteria: Compliant
I-13 Red List:
■ LBC Red List Free
□ LBC Red List Approved
□ Declared
% Disclosed: 100% at 100ppm
VOC Content: 8 g/L
I-10 Interior Performance: CDPH Standard Method v1.2-2017
I-14 Responsible Sourcing: Not Applicable
ISK-0007
EXP. 01 JAN 2025
Original Issue Date: 2017
MANUFACTURER RESPONSIBLE FOR LABEL ACCURACY
INTERNATIONAL LIVING FUTURE INSTITUTE™ living-future.org/declare

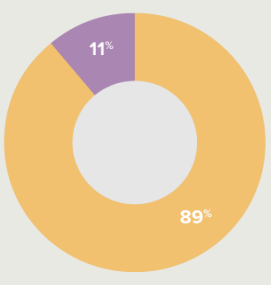
Health Product Declaration®

CAFCO 300 series

Inventory threshold: 1,000ppm
Full disclosure known hazards: Yes
Based on the selected content inventory threshold:

◉ Characterized ○ Screened ○ Identified

TOTAL INTENTIONAL INGREDIENTS



GreenScreen® List Translator Scores

- List Translator Likely Benchmark 1 / Benchmark 1
- List Translator Possible Benchmark 1
- List Translator Benchmark Unknown
- Benchmark 2
- Benchmark 3
- Benchmark 4
- No GS data available

Learn about the GreenScreen® List Translator

Total VOC Content

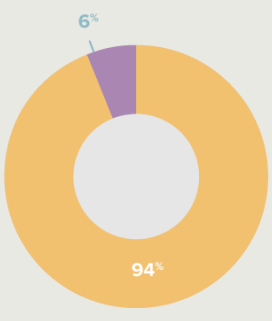
Material (g/l): 0.0 **Regulatory (g/l):** 50.0
Does the product contain exempt VOCs: No
Are ultra-low VOC tints available: N/A

CAFCO 3000

Inventory threshold: 1,000ppm
Full disclosure known hazards: Yes
Based on the selected content inventory threshold:

◉ Characterized ○ Screened ○ Identified

TOTAL INTENTIONAL INGREDIENTS



Total VOC Content

Material (g/l): 8.1 **Regulatory (g/l):** 50.0
Does the product contain exempt VOCs: No
Are ultra-low VOC tints available: N/A

Evaluation programs

Declare

Declare labels are issued to products disclosing ingredient inventory, sourcing and end of life options. Declare labels are based on the Manufacturers Guide to Declare, administered by the International Living Future Institute.

How it works

Material ingredients are inventoried and screened against the Living Building Challenge (LBC) Red List which represents the 'worst in class' materials, chemicals, and elements known to pose serious risks to human health and the greater ecosystem.

The Health Product Declaration®

The HPD Open Standard provides a consistent, and transparent format to accurately disclose the material contents and associated hazard classifications for a building product.

How it works

Material ingredients are screened and categorized according to the hazards that international governmental bodies and toxicology experts have associated with them, based on two listings:

- Authoritative lists maintained or recognized by government bodies
- Screening lists, which include chemicals that government bodies determined need further scrutiny, as well as chemical lists not recognized by any government body.

What's in this product and why

Declare level

Isolatek International takes pride in the fact that all of its Applied Fireproofing products are labeled as Declare™ Red List Free. The Declare program holds manufacturers accountable for their ingredients used in their products and allows the specifiers, architects and others the ability to better understand the products' environmental and sustainable qualities through transparency.

What's in the product and why

The ingredients used to manufacture Isolatek International's CAFCO 300 Series products provide effective, thermally efficient, robust and resilient Applied Fireproofing products.

The in-place products have superior thermal efficiencies, resulting in lower thicknesses to meet specified design criteria providing efficiencies in material and labor.

Our products' primary components are gypsum, which is a naturally occurring element or Portland cement binder, which is obtained and processed from common natural materials, such as limestone and clay. The trade off with the cement -based products compared to the naturally occurring gypsum counterparts is their functional ability to better withstand the exterior elements or other abuses during the construction and life cycle of the structures in which they are installed. Both primary component binder types have widespread availability which are sourced locally near our various production facilities.

What's been done in the design and manufacture in consideration of the potential human health impacts in the use stage

Isolatek International's CAFCO 300 Series products contain recycled cellulose which constitutes up to 10% recycled content of the material by weight. CAFCO 300 Series products are packaged in recyclable kraft paper bags and shipped on wood pallets that can be reused or recycled.

CAFCO 300 Series products are designed to provide required fire resistance ratings on structural steel members and designed to last the lifetime of a building when applied in accordance with the specified design criteria, Isolatek's written Application Instructions, properly maintained after application and not damaged or altered in any way after installation.

Where it goes at the end of its life

Isolatek International's Applied Fireproofing products are designed to provide the required fire resistance ratings on the structural steel members to last the lifetime of the building when applied in accordance with the specified design criteria, our written Application Instructions and are not damaged or altered in any way after their installation.

Although Isolatek's Applied Fireproofing products are designed to last the lifetime of the building, the end life of the product is generally the result of a rehabilitation, which may require removal and replacement of the Applied Fireproofing materials. The removal depends upon the degree of the rehabilitation. Otherwise, the end life of the material is based on the end life of the structure in its entirety. The material is then processed along with the remainder of the structure, primarily as landfill material.

How we're making it healthier

- Isolatek International is committed to legal compliance and ethical business practices in all of our operations.
- Isolatek's vendors must act in accordance with the applicable statutory and international standards regarding environmental protection.
- Isolatek's vendors must minimize environmental pollution and make continuous improvements in environmental protection.
- Isolatek's vendors must set up or use a reasonable environmental management system.
- In Isolatek's purchase arrangements, vendors must observe all applicable laws of their country and international standards, including but not limited to laws and standards relating to the environment, as well as health and safety.

See how we make it greener

References

Declare
CAFCO® 300 Series
CAFCO® 300 AC
CAFCO® 300 HS
CAFCO® 3000

Manufacturer's Guide to Declare
A comprehensive guide providing information about the program, the assessment methodology, how to submit material data to obtain a Declare label and how they are used to meet the Health & Happiness and Materials Petals of the Living Building Challenge.

Health Product Declaration®
CAFCO® 300
CAFCO® 300 AC
CAFCO® 300 HS
CAFCO® 3000

Health Product Declaration Open Standard v2.3
The standard provides guidance to accurately disclose the material contents of a building product using a standard, consistent, and transparent format.

Rating systems

LEED BD+C: New Construction | v4 - LEED v4
Building product disclosure and optimization
Material Ingredients

Credit value options — 1 product each

◉ 1. Reporting ○ 2. Optimization ○ 3. Supply Chain Optimization

LEED BD+C: New Construction | v4.1 - LEED v4.1
Materials and resources
Material Ingredients

Credit value options — 1 product each

◉ 1. Reporting ○ 2. Optimization ○ 3. Supply Chain Optimization

Living Building Challenge
Materials petals imperatives

◉ 10. Red List Free ○ 12. Responsible Industry ○ 13. Living Economy Sourcing

WELL Building Standard®
Air and Mind Features

◉ **X07** Materials Transparency

○ **X08** Materials Optimization

Collaborative for High Performance Schools National Criteria
EQ C7.1 Material Health Disclosures

◉ Performance Approach — 2 points

◉ Prescriptive Approach — 2 points

SM Transparency Report (EPD)™ + Material Health Overview™

VERIFICATION	LCA
3rd-party reviewed	◉
Transparency Report (EPD)	
3rd-party verified	◉

Validity: 08/12/25 – 08/11/30
ISL – 08122025 – 001

MATERIAL HEALTH	Material evaluation
Self-declared	◉

This environmental product declaration (EPD) was externally verified by Jack Geibig (Ecoform) according to ISO 21930:2017; ISO 14025:2006; Smart EPD® Part A; and Smart EPD Part B for spray-applied fire-resistive materials (SFRM).

In accordance with ISO 14044 and the reference PCR, this life cycle assessment was conducted by Sustainable Minds and reviewed by [Reviewer Name] (Ecoform).

Ecoform, LLC
11903 Black Road
Knoxville, TN 37932
(865) 850-1883
www.ecoform.com

ecoform
CLEAN PRODUCT INNOVATIONS

SUMMARY

Reference PCR
Smart EPD® Part B PCR for Spray-Applied Fire-Resistive Materials, 1000-003, v4.0, 01/25 – 01/30

System boundaries
Cradle to gate (A1 – A3) with installation (A4, A5)

Market of applicability
North America

Declared unit: 1,000 kg

LCIA methodology: GWP 100 IPCC 2021 (AR6), TRACI 2.2

LCA software; LCI database
SimaPro Craft 10.2; ecoinvent 3.11, US-EI 2.2

LCA conducted by: Sustainable Minds

Public LCA:
LCA of Isolatek Passive Fire Protection Products

EPD holder:
Isolatek International

Isolatek International
14231 Seaway Rd., Suite 1003
Gulfport, MS 3950
www.isolatek.com
800 631 9600

Contact us

© 2025 | The SM Transparency Report [EPD]™ Program is operated by Sustainable Minds® (www.sustainableminds.com) | Privacy policy

How we make it greener

CAFCO® 300 Series

Expand all

RAW MATERIAL ACQUISITION

Reuse of recycled spent materials

Isolatek uses recycled cellulose in the production of the CAFCO® 300 Series products. CAFCO 300 contains up to 6% recycled cellulose.

Isolatek collaborates with vendors to provide neutral products that minimize environmental impact, conserves energy, reduces and diverts waste, and are sustainable.

These vendors, where possible, are strategically located in close proximity to our manufacturing facilities which minimized transportation costs.

MANUFACTURING

Regional Manufacturing

Isolatek makes a point to minimize energy in our plants, buildings and processes in order to conserve supplies, and minimize consumption of natural resources, especially non-renewable resources.

TRANSPORTATION

Optimized and recycled packaging

CAFCO 300 Series products are packaged in recyclable kraft paper bags and shipped on wood pallets that can be reused or recycled.

USE

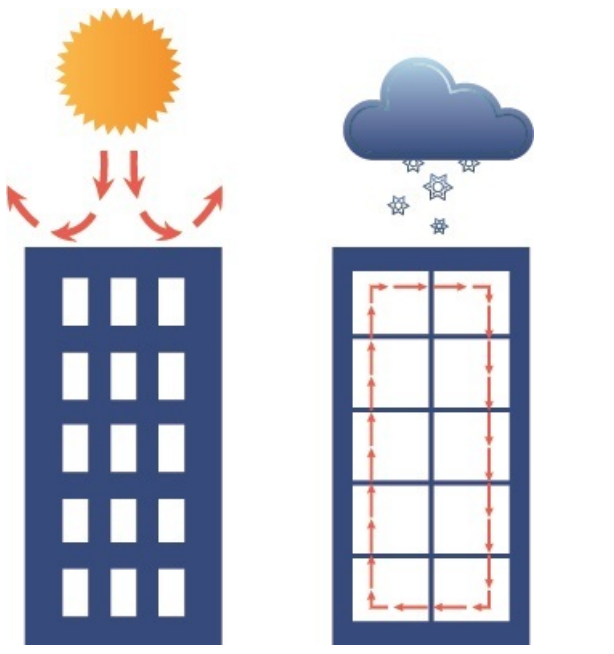
Energy use optimization

Isolatek's materials also provide both NRC (Noise Reduction Coefficient) values and Thermal Resistance (R) values which allow for the reduction of the amount of energy needed for climate control, and reduce the need for additional materials required for soundproofing within the building envelope.

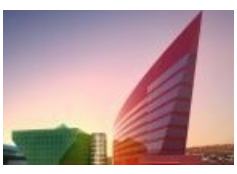
Extended set products are available that eliminates daily wash out, reducing clean water consumption and construction waste.

Reduced water use

Isolatek's materials are designed to use the least amount of water during the installation process, which results in less consumption of natural resources.



END OF LIFE



Durability

Although Isolatek's Applied Fireproofing products are designed to last the lifetime of the building, the end life of the product is generally the result of a rehabilitation, which may require removal and replacement of the Applied Fireproofing materials. The removal depends upon the degree of the rehabilitation. Otherwise, the end life of the material is based on the end life of the structure in its entirety. The material is then processed along with the remainder of the structure, primarily as landfill material.

SM Transparency Report (EPD)™ + Material Health Overview™

VERIFICATION	LCA
3rd-party reviewed	✓
	Transparency Report (EPD)
3rd-party verified	✓

Validity: 08/12/25 – 08/11/30
ISL – 08122025 – 001

MATERIAL HEALTH	Material evaluation
Self-declared	✓

This environmental product declaration (EPD) was externally verified by Jack Geibig (Ecoform) according to ISO 21930:2017; ISO 14025:2006; Smart EPD® Part A; and Smart EPD Part B for spray-applied fire-resistive materials (SFRM).

In accordance with ISO 14044 and the reference PCR, this life cycle assessment was conducted by Sustainable Minds and reviewed by [Reviewer Name] (Ecoform).

Ecoform, LLC
11903 Black Road
Knoxville, TN 37932
(865) 850-1883
www.ecoform.com

ecoform
CLEAN PRODUCT INNOVATIONS

SUMMARY

Reference PCR
Smart EPD® Part B PCR for Spray-Applied Fire-Resistive Materials, 1000-003, v4.0, 01/25 – 01/30

System boundaries
Cradle to gate (A1 – A3) with installation (A4, A5)

Market of applicability
North America

Declared unit: 1,000 kg

LCIA methodology: GWP 100 IPCC 2021 (AR6), TRACI 2.2

LCA software; LCI database
SimaPro Craft 10.2; ecoinvent 3.11, US-EI 2.2

LCA conducted by: Sustainable Minds

Public LCA:
LCA of Isolatek Passive Fire Protection Products

EPD holder:
Isolatek International

Isolatek International
14231 Seaway Rd., Suite 1003
Gulfport, MS 3950
www.isolatek.com
800 631 9600

Contact us

© 2025 | The SM Transparency Report [EPD]™ Program is operated by Sustainable Minds® (www.sustainableminds.com) | Privacy policy