

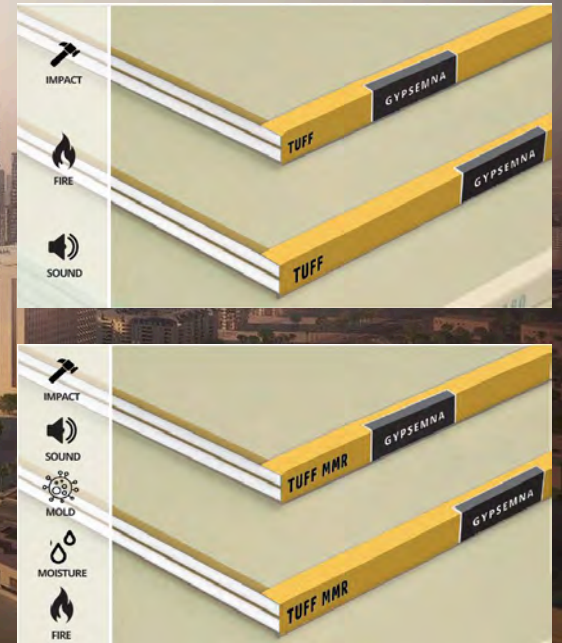
GYPSUM BOARD

Tuff Mold And Moisture Resistance (TF & TFMMR)

Manufactured By : Gypsemna Co LLC

Environmental Product Declaration

In accordance with ISO 14025 and EN 15804:2012+A2:2019 for:



Program :

EFI Programme

EPD Reference number :

250712EPD CR:P-3100

Issue date :

18.07.2025

Valid until :

17.07.2030

Geographical Scope :

Manufactured in Abu Dhabi (UAE)
and distributed globally.



EPD Owner :	Gypsemna Co. LLC
Address :	51 MR2, ICAD II, Musaffah Abudhabi, United Arab Emirates
Website :	www.gypsemna.com
Email :	info@gypsemna.com



NOT ALL GYPSUM BOARDS ARE THE SAME

Choosing the right one can make all the difference in performance, safety, and durability.



Accountabilities for PCR, LCA and independent, third-party verification

Product Category Rules (PCR)

CEN standard EN 15804 serves as the Core Product Category Rules (PCR)

PCR P-3100: Construction products in general (EN15804)

PCR review was conducted by: *The Environmental Footprint Institute*

Life Cycle Assessment (LCA)

LCA accountability: CQES International LLC

☐ Internal Verification

☒ Third Party Verification

Independent verification of the declaration and data, according to ISO 14025:2006 and ISO 14040:

☒ EPD internal verification process ☐ EPD verification by EPD process certification

Third Party Verifier : **Mr. Iván Jiménez**

Accredited by: The Environmental Footprint Institute

Procedure for follow-up of data during EPD validity involves Internal verifier:

☒ Yes

☐ No

The EPD owner has the sole ownership, liability and responsibility for the EPD.

EPDs within the same product category but registered in different EPD programs may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterization factors); have equivalent content declarations; and be valid at the time of comparison.



"Gypsemna" (signifies as "Our Gypsum Company" in Arabic) was established in 2006 by setting up the first world scale gypsum plasterboard plant in UAE's capital city, Mussafah (ICAD- 2) Abu Dhabi. It is currently the largest Gypsum Plasterboard manufacturing plant in the Region, with an annual production capacity of 50 million m2. Gypsemna has been operational since June 2009, catering the plasterboard demand of the region. Due to the market requirements, we swiftly expanded our product line to include not only the Gypsum Plasterboards, but also the provision of complete Drywall Systems.

Largest in the Region

- Total Factory Area: 302,000 m2
- Built up Area: 46,662 m2
- Warehouse Area: 6,000 m2
- Production Capacity: 50 million m2/Annum or 6200m2/hr
- Plaster plant speed: 90m/min
- Warehouse Capacity: 2 million m2 of plasterboards
- Major Equipment Supplier: GRENZBACH BSH GmbH, Germany

Growing Market Presence

We have positioned our products as world-class products with an effective establishment in highly competitive international markets. Currently, we not only successfully meet the orders within the local market, but also those of exporting countries across the GCC, Middle East, Africa and South Asia. Furthermore, our short lead times have provided efficiency and consistency to the various industries.

Solution Providers to Market Sectors

Vast production capacity ensures that we serve the following market sectors:

- Residential & Commercial Projects
- Hotels & Accommodations
- Hospitals & Health Care Centres
- Educational Institutes
- Cinemas & Theatres
- Industrial Warehouses
- Airports & Terminals



**MENA,S LARGEST
GYPSUM PLASTERBOARD
MANUFACTURER**



PRODUCT-RELATED OR MANAGEMENT SYSTEM-RELATED CERTIFICATIONS:

The following certifications are recognized under product-related or management system-related certifications:



COMMITMENT TO SUSTAINABILITY

Gypsemna is committed to sustainable practices through both backward and forward integration in its manufacturing processes. Our core sustainability initiatives include:

- Responsible Sourcing: Procuring raw materials from the nearest sources to minimize transportation impact and reduce emissions and using biogenic packaging and raw materials when available.
- Waste Reduction: Utilizing recycled materials and optimizing waste management to lower environmental impact and carbon footprint.

Name and location of production site : Gypsemna Co LLC, 51 MR2, ICAD II, Musaffah, Abudhabi, UAE

GYPSUM BOARD

Tuff Mold And Moisture Resistance (TF & TFMMR)

Product Overview

Gypsemna’s TUFF Series Gypsum Boards—including Tuff (TF) and Tuff mold & moisture resistance (TFMMR)—are high-performance interior gypsum boards designed for applications requiring enhanced durability and protection. Both boards consist of a solid set, fire-resistive Type X gypsum core enclosed in yellow-colored face paper and a strong liner back paper, both made from 100% recycled material. The TFMMR variant features an additional mold and moisture-resistant formulation, making it ideal for areas exposed to humidity or wet conditions. Both variants are engineered with a specially formulated core that delivers high impact resistance, abuse resistance, sound blocking, and fire resistance making them especially suitable for high-traffic interior areas where surface damage is likely to occur.

Basic Uses

Gypsemna’s Tuff and Tuff mold and moisture resistance (TFMMR) Type X gypsum boards are designed for interior walls and ceilings across all building categories where high performance is required. These boards provide enhanced impact resistance, abrasion resistance, sound blocking, and fire resistance, with the TFMMR variant offering additional protection against mold and moisture. Ideal for use in areas prone to cavity penetration and surface damage, they are well-suited for demanding environments such as schools, hospitals, correctional facilities, gymnasiums, and other heavy-duty commercial or institutional projects. These boards are especially beneficial in wall assemblies where durability and protection are critical requirements.

Advantages

- Acoustically tested and Fire rating upto 4 hours.
- Greater protection against impact that can lead to indentation, designed for intense duty and low maintenance. for more information refer to product TDS.



Technical Data

Physical Properties

	TF	TFMMR
Thickness, Nominal	12.5 to 15mm	12.5-15 mm
Width, Nominal	●———— 1200mm ————●	●———— 1200mm ————●
Length, Standard	●———— 2400mm, 3000mm ————●	●———— 2400mm, 3000mm ————●
Weight, Nominal	●———— Refer to TDS ————●	●———— Refer to TDS ————●
Edges	TE, SE	TE, SE
Color	Yellow	Yellow

Fire-Resistance Characteristics ASTM E84

Core Type	●———— Type X ————●
Combustibility	●———— Non-combustible Core ————●
Surface Burning Characteristics	●———— Class A1 ————●
Smoke Development	●———— 15 ————●

Standards and References

ASTM C1396	ASTM C1396
ASTM C473	ASTM C473
ASTM C840	ASTMC840
ASTM E84	ASTM E84, D3273
●———— EN 520 ————●	●———— EN 520 ————●

EPD Scope

This Environmental Product Declaration (EPD) is based on the average production of Gypsum Board products TF and TFM MR, which are commonly used for interior walls and ceilings in various building applications. The declared products have an average mass of approximately 11.50 kg/m², depending on the specific dimensions and configurations. The LCA results presented in this document represent these products and are intended to reflect the environmental performance of similar gypsum boards within the same product family.

Declared Unit :

The Declared Unit of the Life Cycle Assessments is one ton of Gypsum Board plus the proportional part of packaging. All direct and indirect environmental impacts, as well as the use of resources, are reported referred to this unit. This EPD presents the environmental impacts associated to the LCA of the analysed products.

Time Representativeness :

January 2024 to December 2024

Database(s) and LCA software used:

Version 3.19.0.7 of software Air.e LCA™ with Ecoinvent™ 3.11.0 database has been used for LCA modelling and impacts calculations. EN15804 system model is used in this LCA.

Electricity usage in A3 :

A specific dataset with the Life Cycle Inventory (LCI) corresponding to the electricity mix in United Arab Emirates, has been used for this LCA. 0.6279 kg CO₂eq/kWh (GWP-GHG),

Cut-off rules:

More than 99% of the materials and energy consumption have been included. The Polluter Pays Principle and the Modularity Principle have been followed.

Allocation method:

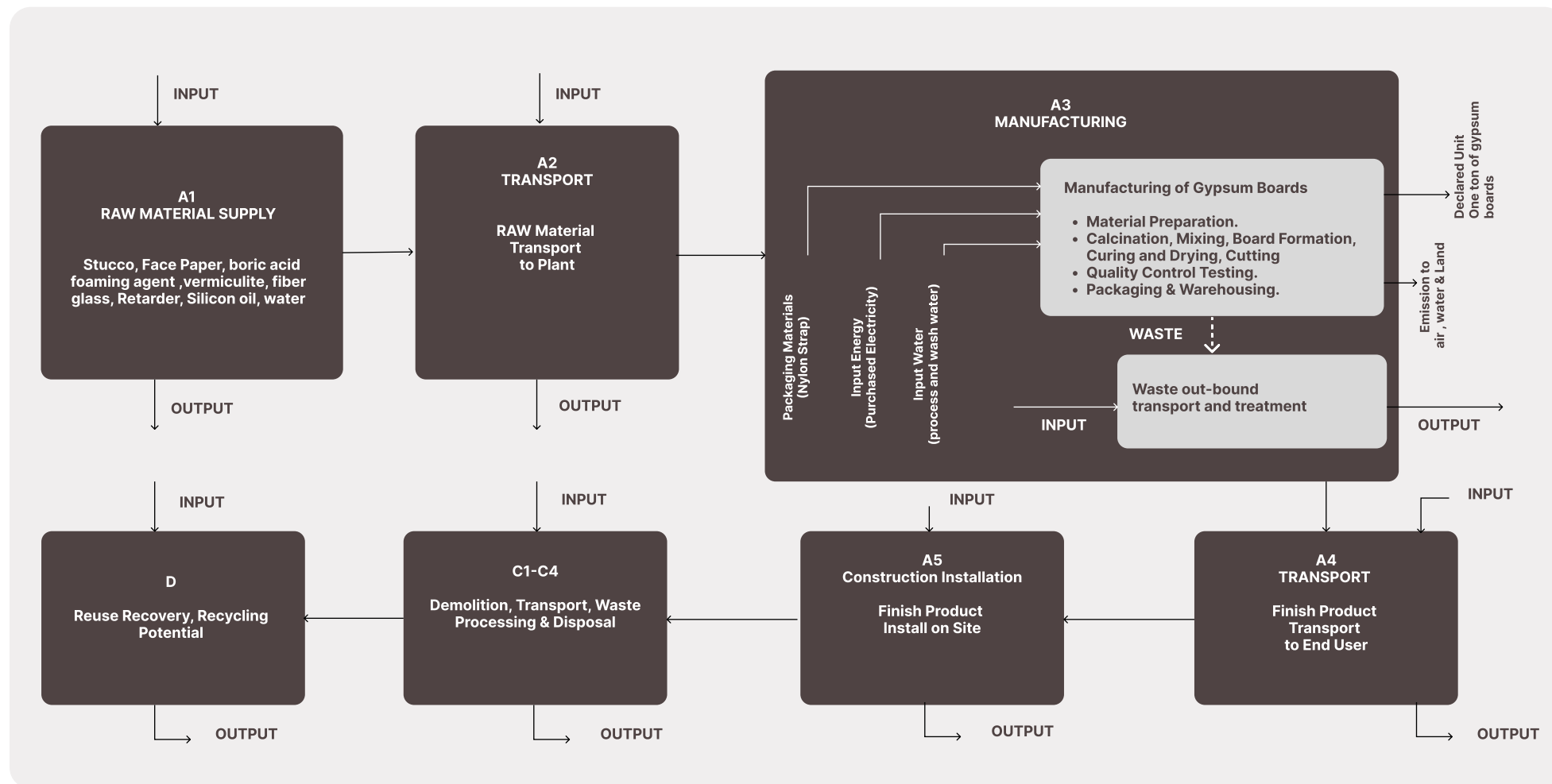
The allocation of common inputs and outputs follows the general allocation rule, which represents the proportion of each specific product's production relative to the total production, expressed in tons. Generic process data for the production of input materials were utilized.

Declared Unit Conversion:

Name	Value	Unit
DU	1	ton
Conversion factor / 1 ton	86.96	meter square

DESCRIPTION OF SYSTEM BOUNDARIES:

Cradle to gate with options (A1-A3, A4,A5,C1-C4 and D. The life cycle stages B1-B7 were excluded from the LCA study.



The Life Cycle Assessment (LCA) results and associated environmental impacts presented in this document represent an average across all TF and TFMMR Gypsum Boards products. Variations between individual products are minimal and primarily attributed to differences in raw material composition and production parameters. These boards are manufactured using gypsum, along with other additives, through a process involving calcination, shaping, and curing. The average product profile reflects the standard characteristics, manufacturing processes, and performance attributes typical of TF and TFMMR Gypsum Boards within its category.

SYSTEM BOUNDARIES

This EPD covers all product stages from “cradle to gate with options,” meaning this LCA includes Production stage A1-A3, Transportation A4, Installation A5, End-of-life stages C1-C4, and Resource recovery stage D in accordance with EN 15804 + A2/AC:2021.

The system boundaries of this environmental study encompass not only the processes controlled by Gypsemna Co. LLC but also include upstream and downstream activities, such as fuel extraction, material production, and electricity generation, which are not directly managed by the company.

All related direct and indirect environmental impacts associated with these elements have been calculated and are included in the LCAs within this EPD.

Possible scopes of the LCA defined in the European standard EN 15804:2012+A2:2019 are:

Module	Product Stage			Construction Process Stage		Use Stage	End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use, maintenance, repair, replacement, refurbishment, operational energy and water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery- Recycling-potential
	A1	A2	A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Modules declared	X	X	X	X	X	ND	X	X	X	X	X
Geography	UAE GLO	UAE GLO	UAE	UAE GLO	UAE GLO	--	UAE GLO	UAE GLO	UAE GLO	UAE GLO	UAE GLO

* X - Included

UAE - United Arab Emirates

ND - Not Included

GLO - Global

CORE PROCESSES

A1-Raw Material Supply: This stage includes the extraction and pre-treatment of raw materials essential for producing gypsum Boards. The process accounts for materials sourced from natural deposits or as by-products of industrial processes, along with the preparation of performance-enhancing additives and other components required for manufacturing.

A2 - Transport: Transport includes the delivery of raw materials and additives to the manufacturing plant, as well as the internal movement of materials within the facility. The transport of raw materials is based on weighted average values for supplier distances for the year 2024.

- Vehicle types: 3.5-7.5t & >32t trucks, Euro 5 standard
- Vehicle capacity: 3.5-7.5 tons and 25 tons
- Fuel type and consumption: Diesel, 0.38 liters per km
- Capacity utilization: 50% including empty backhauls, as assumed in Ecoinvent
- Bulk transport: Based on the mass of transported materials.

A3 - Manufacturing: The manufacturing process involves several stages, like preparation of raw materials (grinding, calcination of gypsum to stucco), mixing of stucco with additives and forming the slurry, layering the slurry between base sheets and shaping into continuous boards, drying the boards in dryers and cutting them to the required sizes, finishing, quality checks, and packaging for distribution. the electricity consumption data used for this EPD is based on the UAE grid mix from Ecoinvent, Medium Voltage.

A4 - Transport: This stage involves the transportation of gypsum Boards to construction sites. Delivery typically occurs via road and sea transport, depending on the project's location.

A5 - Installation: The installation stage involves securing the boards using mechanical fasteners or adhesives. Waste generated during installation is minimal and therefore considered negligible. Packaging waste is disposed of during Stage A5, while any installation-related waste is addressed in Module C4 (landfilling).

C1 - De-Construction/demolition: At the end of their life cycle, the boards are typically deconstructed selectively. It is assumed that 100% of the waste boards are collected as construction waste. Demolition is performed using diesel-powered machinery, with an average energy consumption of 0.01 kWh/kg, consistent with practices for non-reinforced construction materials.

C2 - Waste Transport: This stage includes the transportation of waste boards and adhesives along with other concrete wastes to disposal or recycling facilities. An average transport distance of 50 km is assumed for this stage.

C3 Waste Processing: Waste processing includes the handling of discarded boards. Gypsum board waste processing for recycling or reuse is excluded due to minimal impact, but the recycling of packaging materials is included.

C4 Disposal: At the end of their lifecycle, boards and adhesives are disposed of in construction and demolition landfills. Packaging waste is processed in Module A5.

D. Benefits and Loads: This stage evaluates the potential environmental benefits or burdens from the reuse, recycling, or energy recovery of materials at the end of life. Since no recyclable materials are utilized, this stage does not account for any significant offsets or environmental benefits.



CONTENT DECLARATION

The following list includes the main components and materials used in the manufacturing and packaging of porcelain ceramic tile.

Material Used	Quantity kg/DU	Percentage (%)
Stucco	9.31	80.98
Paper	0.49	4.30
Boric Acid	0.01	0.09
Foaming agent	0.01	0.05
Vermiculite	0.11	0.98
Fiber Glass	0.04	0.33
Retarder	0.03	0.22
Water	1.44	12.50
Silicon Oil	0.02	0.16
Total	11.50	100%

Packaging Material	Weight kg/DU	Weight % (Versus the Product)	Weight biogenic carbon, kg C/kg of packaging material
Nylon Straps	7.19E-05	7.19E-03	0.00E+00

Dangerous substances from the candidate list of SVHC for
Authorisation:

Dangerous substances from the candidate list of SVHC for Authorisation:	EC No.	CAS No.	Weight (%) per declared unit
None			
None			

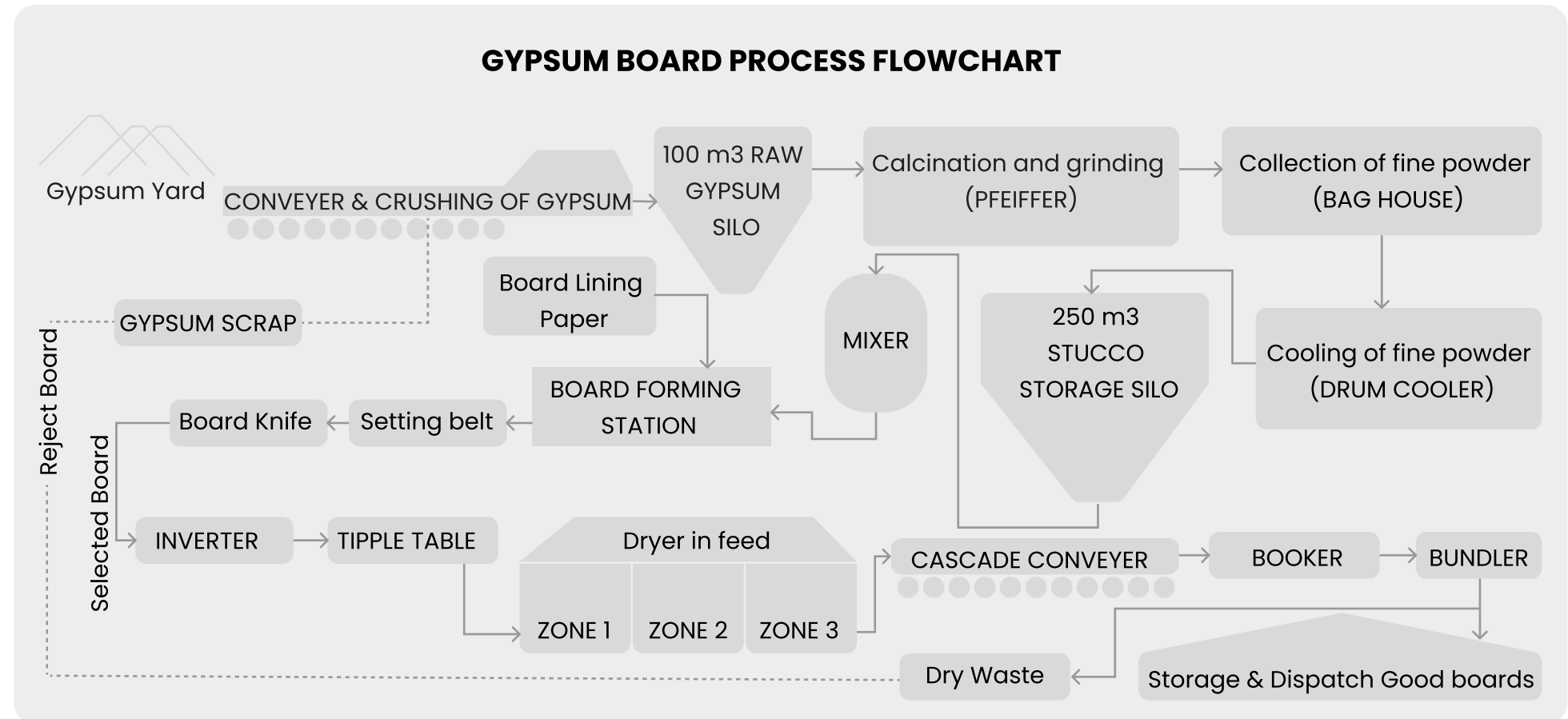
BIOGENIC CARBON CONTENT:

Biogenic carbon content	Kg C/Declared Unit
Biogenic carbon content in product	0.00E+00 kg C
Biogenic carbon content in accompanying packaging	0.00E+00 kg C

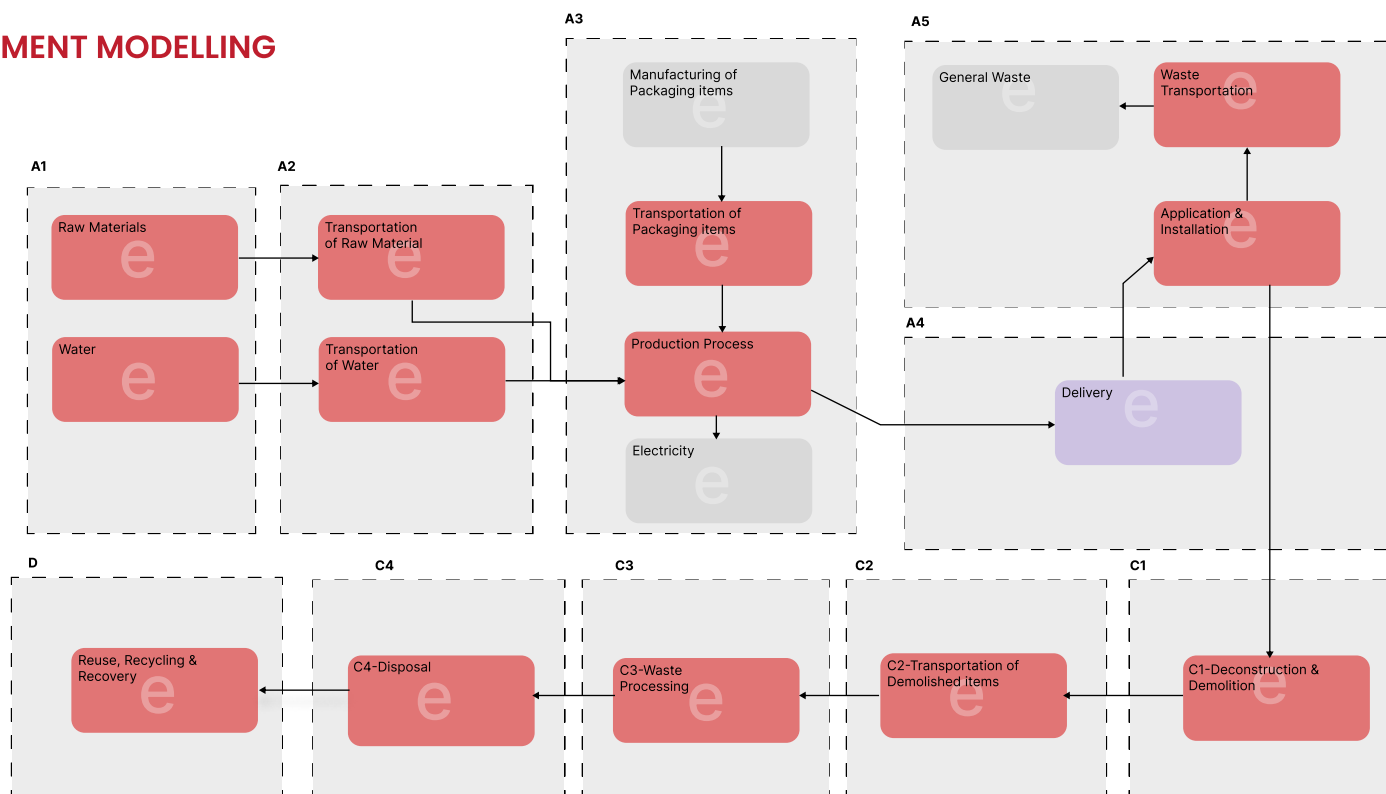
MANUFACTURING PROCESS:

The gypsum board manufacturing process starts with raw gypsum sourced from the yard, which is conveyed and crushed. The crushed material is then stored in a 100 m³ silo before undergoing calcination and grinding in a Pfeiffer mill to produce stucco. The resulting fine powder is collected in a baghouse and subsequently cooled using a drum cooler. The cooled stucco is transferred to a 250 m³ storage silo, from where it is fed into a mixer. Here, it is blended with wet and dry additives to form a homogeneous slurry. This slurry is poured onto a continuously moving belt lined with paper at the board forming station. A board knife cuts the continuous sheet into specified lengths, which then pass through various stages including the inverter, tipple table, and cascade conveyor to facilitate initial setting and pre-drying. The boards then enter a multi-zone dryer where remaining moisture is removed. Upon exiting the dryer, the boards are inspected and sorted: acceptable boards proceed to the take-off, bundler, and booker for final handling and dispatch, while defective boards are rejected. Gypsum scrap is collected separately for recycling back into the process.

GYPSUM BOARD PROCESS FLOWCHART



LIFE CYCLE ASSESSMENT MODELLING



ENVIRONMENTAL PERFORMANCE

Potential Environmental Impacts

In the following tables, the environmental performance of the declared unit, “One ton of Product (Gypsum Boards),” is presented for Gypsemna Co. LLC. The data encompasses the product's total environmental impact and its contribution across all sub-phases of the life cycle. During the assessment, no significant differences were observed in the consumption of electricity, water, diesel, raw materials, and chemicals across the manufacturing process for gypsum boards. As such, calculations are based on total production versus total consumption, normalized to the production of the declared product. These EPD values are specifically applicable to gypsum boards, and the estimated impact results are relative statements. They do not indicate endpoint impacts, threshold exceedances, safety margins, or associated risks.

EN 15804 + A2 disclaimers: The indicators for Abiotic Depletion and Water Use, along with all optional indicators except for Particulate Matter and Ionizing Radiation (Human Health), should be interpreted with caution. High uncertainties or limited experience with these indicators necessitate careful application of the results.

CORE ENVIRONMENTAL IMPACT INDICATORS

Core Environmental Impact Indicators													
Impact Category	Unit	A1	A2	A3	A4	A5	B1-B7	C1	C2	C3	C4	Total	D
Climate change (GWP) –fossil	kg CO2e	1.34E+02	4.92E+01	2.10E+01	4.76E+01	4.00E-03	0.00E+00	3.62E+00	9.89E+00	0.00E+00	6.26E+00	2.71E+02	0.00E+00
Climate change (GWP) –biogenic	kg CO2e	3.65E-01	8.53E-03	3.28E-03	1.06E-02	3.55E-02	0.00E+00	3.61E-04	2.27E-03	0.00E+00	1.94E-03	4.28E-01	0.00E+00
Climate change (GWP) –LULUC	kg CO2e	3.70E+00	2.52E-02	1.92E-03	2.14E-02	1.11E-06	0.00E+00	3.71E-04	4.54E-03	0.00E+00	3.58E-03	3.76E+00	0.00E+00
Climate change (GWP) – total	kg CO2e	1.38E+02	4.93E+01	2.10E+01	4.77E+01	3.95E-02	0.00E+00	3.62E+00	9.90E+00	0.00E+00	6.26E+00	2.75E+02	0.00E+00
Ozone depletion	kg CFC-11e	1.19E-04	6.74E-07	4.68E-07	6.05E-07	2.96E-11	0.00E+00	5.38E-08	1.34E-07	0.00E+00	1.74E-07	1.21E-04	0.00E+00
Acidification	mol H+e	9.43E-01	1.08E+00	4.32E-02	1.83E-01	1.22E-05	0.00E+00	3.24E-02	2.37E-02	0.00E+00	4.38E-02	2.35E+00	0.00E+00
Eutrophication, aquatic freshwater	kg Pe	3.27E-02	2.80E-03	1.65E-03	5.17E-03	5.25E-06	0.00E+00	1.17E-04	1.08E-03	0.00E+00	5.48E-04	4.40E-02	0.00E+00
Eutrophication, aquatic marine	kg Ne	2.45E-01	2.72E-01	9.73E-03	5.67E-02	1.28E-04	0.00E+00	1.51E-02	5.52E-03	0.00E+00	1.69E-02	6.20E-01	0.00E+00
Eutrophication, terrestrial	mol Ne	2.30E+00	3.01E+00	9.68E-02	6.14E-01	3.77E-05	0.00E+00	1.65E-01	5.88E-02	0.00E+00	1.84E-01	6.43E+00	0.00E+00
Photochemical ozone formation	kg NMVOCe	6.53E-01	8.37E-01	5.94E-02	2.34E-01	2.62E-05	0.00E+00	4.94E-02	3.21E-02	0.00E+00	6.63E-02	1.93E+00	0.00E+00
Abiotic depletion, minerals & metals	kg Sbe	5.54E-03	8.19E-05	1.50E-04	1.54E-04	4.12E-09	0.00E+00	1.26E-06	3.30E-05	0.00E+00	9.11E-06	5.96E-03	0.00E+00
Abiotic depletion of fossil resources	MJ	1.72E+03	6.25E+02	3.58E+02	6.58E+02	2.96E-02	0.00E+00	4.72E+01	1.37E+02	0.00E+00	1.53E+02	3.70E+03	0.00E+00
Water use	m³ W.ed	5.27E+01	2.23E+00	2.85E+00	3.59E+00	-1.16E-02	0.00E+00	1.23E-01	7.75E-01	0.00E+00	6.78E+00	6.90E+01	0.00E+00

USE OF NATURAL RESOURCES

Use of Natural Resources											
Impact Category	UNIT	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	Total	D
Renewable PE used as energy	MJ	1.99E-03	1.29E-04	8.58E-09	0.00E+00	4.93E-06	2.73E-05	0.00E+00	2.24E-05	2.17E-03	0.00E+00
Renewable PE used as materials	MJ	1.07E+02	9.07E+00	-6.60E-01	0.00E+00	2.96E-01	1.93E+00	0.00E+00	0.00E+00	1.18E+02	0.00E+00
Total use of renewable PE	MJ	2.74E+03	6.58E+02	2.96E-02	0.00E+00	4.72E+01	1.37E+02	0.00E+00	1.53E+02	3.73E+03	0.00E+00
Non-renew. PE used as energy	MJ	2.44E+02	2.87E+01	1.95E-01	0.00E+00	7.71E-01	6.03E+00	0.00E+00	4.03E+00	2.84E+02	0.00E+00
Non-renew. PE used as materials	MJ	2.72E+03	6.58E+02	-4.02E-01	0.00E+00	4.72E+01	0.00E+00	0.00E+00	1.53E+02	3.58E+03	0.00E+00
Total use of non-renewable PE	MJ	4.11E+02	0.00E+00	6.60E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.12E+02	0.00E+00
Use of secondary materials	Kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	MJ	2.64E+01	8.76E-02	-2.69E-04	0.00E+00	3.02E-03	1.89E-02	0.00E+00	1.58E-01	2.67E+01	0.00E+00
Use of non-renew. Secondary fuels	MJ	1.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+02	0.00E+00
Use of net fresh water	m3	4.15E+02	9.07E+00	5.59E-04	0.00E+00	2.96E-01	1.93E+00	0.00E+00	1.43E+00	4.27E+02	0.00E+00



Additional Environmental Impact Indicators											
Impact Category	UNIT	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	Total	D
Particulate matter	Incidence	1.27E-05	3.65E-06	1.99E-10	0.00E+00	9.25E-07	7.20E-07	0.00E+00	1.01E-06	1.90E-05	0.00E+00
ionizing radiation, human	kBq U234e	8.16E+00	5.27E-01	2.62E-05	0.00E+00	2.01E-02	1.12E-01	0.00E+00	9.18E-02	8.91E+00	0.00E+00
Eco-toxicity (freshwater)	CTUe	1.03E+03	1.20E+02	6.82E-01	0.00E+00	2.56E+00	2.53E+01	0.00E+00	1.11E+01	1.19E+03	0.00E+00
Human toxicity, cancer effects	CTUe	7.15E-08	8.06E-09	1.35E-12	0.00E+00	3.69E-10	1.64E-09	0.00E+00	1.13E-09	8.27E-08	0.00E+00
Human toxicity, non-cancer	CTUe	1.17E-06	4.05E-07	2.02E-10	0.00E+00	5.80E-09	8.58E-08	0.00E+00	2.55E-08	1.70E-06	0.00E+00
Land use related impacts/soil	Dimensionless	1.06E+03	3.82E+02	4.79E-02	0.00E+00	3.12E+00	8.18E+01	0.00E+00	3.01E+02	1.82E+03	0.00E+00

EN 15804+A2 disclaimer for Ionizing radiation, human health. This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

Additional Environmental Impact Indicators											
Impact Category	UNIT	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	Total	D
GEP-GHG	kg CO2e	3.96E+00	2.18E-02	1.14E-06	0.00E+00	3.75E-04	4.61E-03	0.00E+00	3.71E-03	3.99E+00	0.00E+00

This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product as defined by IPCC AR 5 (IPCC 2013) This indicator is almost equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

End of Life - Outflows											
Impact Category	UNIT	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	Total	D
Hazardous waste	Kg	3.10E+00	9.67E-02	3.24E-06	0.00E+00	1.05E-03	2.07E-02	0.00E+00	5.28E-03	3.23E+00	0.00E+00
Non-hazardous waste	Kg	5.29E-01	1.61E-02	5.13E-07	0.00E+00	2.10E-04	1.57E-03	0.00E+00	1.66E-03	5.49E-01	0.00E+00
Radioactive waste	Kg	1.79E+01	0.00E+00	4.32E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E+01	0.00E+00

End of Life - waste											
Impact Category	UNIT	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	Total	D
Components for reuse	Kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	Kg	1.10E-03	4.35E-05	2.07E-09	0.00E+00	6.70E-07	9.30E-06	0.00E+00	2.95E-06	1.15E-03	0.00E+00
Materials for energy recovery	Kg	1.18E+01	1.50E+00	6.64E-05	0.00E+00	5.29E-02	3.13E-01	0.00E+00	1.62E-03	1.37E+01	0.00E+00
Exported energy - electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy - thermal	MJ	7.55E-01	5.46E-02	3.47E-06	0.00E+00	2.23E-03	1.16E-02	0.00E+00	9.95E-03	8.33E-01	0.00E+00



MANDATORY STATEMENTS

Explanatory material can be obtained from EPD owner and/or LCA author. Contact information can be found below. The owner of the declaration shall be liable for the underlying information and evidence. The LCA Author shall not be liable with respect to manufacturer information, life cycle assessment data and evidences. The verifier and The Environmental Footprint Institute do not make any claim or present any responsibility about the legality of the product. EPDs within the same product category but from different programs may not be comparable.

CONTACT INFORMATION

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ADDITIONAL INFORMATION

No additional information is provided.

INFORMATION RELATED TO SECTOR EPD

This is not sector EPD.

DIFFERENCES VERSUS PREVIOUS VERSIONS

This is the first version of the EPD.

REFERENCES

- *LCA Report: Life Cycle Inventory of Gypsum Boards (TF & TFM MR) by Gypsemna Co. LLC.*
- *Software: Air.e LCA Version 3.19.0.6 www.solidforest.com*
- *Main database: Ecoinvent 3.11.0 www.ecoinvent.org*
- *Geographical scope of the EPD: United Arab Emirates.*
- *ISO 14040:2006 "Environmental management -- life cycle assessment -- principles and framework";*
- *ISO 14044:2006 "Environmental management -- life cycle assessment -- requirements and guidelines";*
- *ISO 14020:2000 "Environmental Labels and declarations - General Principles*
- *ISO 14025:2006 "Environmental labels and declarations -- type III environmental declarations - principles and procedures".*
- *EN 15804+A2:2019/AC:2021 European Committee for Standardization: Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products.*

