

# ENVIRONMENTAL PRODUCT DECLARATION

## USG SECUROCK® BRAND GYPSUM-FIBER ROOF BOARD

USG Securock® Brand Gypsum-Fiber Roof Board is a high-performance roof board for use in low-slope roofing systems. Its unique fiber-reinforced, uniform composition gives the panel strength and water resistance through to the core. USG Securock® Brand Gypsum-Fiber Roof Board provides exceptional bond and low absorption in adhered systems and, with uniform composition, achieves high wind-uplift ratings with no risk of facer delamination. Made from 97% recycled material, USG Securock® Brand Gypsum-Fiber Roof Board combines superior performance with sustainable design for all types of built-up roofing systems and most fluid applied, spray foam, metal and any polyester reinforced single ply or modified bitumen membrane systems.

### TRACI v2.1 ENVIRONMENTAL IMPACTS (CRADLE-TO-GATE)

Declared Unit – 1,000 square feet

	1/4" Securock® Brand Roof Board	3/8" Securock® Brand Roof Board	1/2" Securock® Brand Roof Board	5/8" Securock® Brand Roof Board
Global Warming Potential (kg CO <sub>2</sub> eq.)	2.38E+02	2.88E+02	3.49E+02	4.29E+02
Ozone Depletion Potential (kg CFC-11 eq.)	5.39E-10	6.28E-10	7.63E-10	9.00E-10
Acidification Potential (kg SO <sub>2</sub> eq.)	1.31E+00	1.40E+00	1.46E+00	1.56E+00
Eutrophication Potential (kg N eq.)	2.59E-02	3.07E-02	3.67E-02	4.48E-02
Photochemical Ozone Creation Potential (kg O <sub>3</sub> eq.)	7.64E+00	9.33E+00	1.14E+01	1.40E+01
Abiotic Resource Depletion Potential Fossil Fuels (MJ, LHV)	4.60E+02	5.80E+02	7.20E+02	8.94E+02

For over a century, sustainable practices have naturally been an inherent part of our business at USG. Today, they help shape the innovative products that become the homes where we live, the buildings where we work and the arenas where we play. From the product formulations we choose, to the processes we employ, USG is committed to designing, manufacturing, and distributing products that minimize overall environmental impacts and contribute toward a healthier living space. We believe that transparency of product information is essential for our stakeholders and EPDs are the next step toward an even more transparent USG. For additional information, visit [usg.com](http://usg.com), [cgcinc.com](http://cgcinc.com) and [usgdesignstudio.com](http://usgdesignstudio.com)

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This declaration is an environmental product declaration (EPD) in accordance with ISO 14025 and ISO 21930; 2017. EPDs rely on Life Cycle Assessment (LCA) to provide information on a number of environmental impacts of products over their life cycle. Exclusions: EPDs do not indicate that any environmental or social performance benchmarks are met, and there may be impacts that they do not encompass. LCAs do not typically address the site-specific environmental impacts of raw material extraction, nor are they meant to assess human health toxicity. EPDs can complement but cannot replace tools and certifications that are designed to address these impacts and/or set performance thresholds – e.g. Type 1 certifications, health assessments and declarations, environmental impact assessments, etc. Accuracy of Results: EPDs regularly rely on estimations of impacts, and the level of accuracy in estimation of effect differs for any particular product line and reported impact. Comparability: EPDs are not comparative assertions and are either not comparable or have limited comparability when they cover different life cycle stages, are based on different product category rules or are missing relevant environmental impacts. EPDs from different programs may not be comparable.

DECLARATION NUMBER	EPD 128	
PROGRAM OPERATOR	ASTM International – 100 Barr Harbor Drive, West Conshohocken, PA USA www.astm.org	
DECLARATION HOLDER	USG Corporation - 550 W. Adams St., Chicago, IL USA	
DECLARED PRODUCT	USG Securock® Brand Gypsum-Fiber Roof Board	
REFERENCE PCR	Product Category Rule for Environmental Product Declarations: PCR for Gypsum Panel Products, NSF International, Per ISO 14025 and 21930:2017, Valid through July 17, 2014 For details contact NSF International.	
DATE OF ISSUE	4/8/20	
PERIOD OF VALIDITY	4/8/25	
CONTENTS OF THE DECLARATION	This EPD is complete and contains the following: <ul style="list-style-type: none"> <li>• Product System Documentation</li> <li>• Life cycle Calculation Rules</li> <li>• Life Cycle Assessment Results</li> <li>• Further Information</li> <li>• References</li> </ul>	
This declaration was independently verified in accordance with ISO 14025 and ISO 21930:2017 <input type="checkbox"/> INTERNAL <input checked="" type="checkbox"/> EXTERNAL		Tim Brooke, ASTM International
This life cycle assessment was independently verified in accordance with ISO 14044 and the reference PCR by:		Thomas P. Gloria, Industrial Ecology Consultants

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## USG SECUROCK® BRAND GYPSUM-FIBER ROOF BOARD

## 1. Product System Documentation

### 1.1 Product Description and Product Identification

USG Securock® Brand Gypsum-Fiber Roof Board is a high-performance roof board for use in low-slope roofing systems. Its unique fiber-reinforced, uniform composition gives the panel strength and water resistance through to the core. USG Securock® Brand Gypsum-Fiber Roof Board provides exceptional bond and low absorption in adhered systems and, with uniform composition, achieves high wind-uplift ratings with no risk of facer delamination. Made from 97% recycled material, USG Securock® Brand Gypsum-Fiber Roof Board combines superior performance with sustainable design for all types of built-up roofing systems and most fluid applied, spray foam, metal and any polyester reinforced single ply or modified bitumen membrane systems. USG Securock® Brand Gypsum-Fiber Roof Board Panels provide a smooth, flat surface that resists swelling and warping often seen with wood-based Roof Boards, and contains none of the resins, adhesives or solvents that can stain floor covering materials. It also offers greater resistance to indentation than other roof board products and can be used throughout a home regardless of the flooring material chosen.

### 1.2 Application

USG Securock® Brand Roof Board panels are intended for low-slope roof applications. See [usg.com](http://usg.com) for detailed application instructions.

### 1.3 Product Technical Data

**Table 1: Technical Specifications**

NAME	UNIT OF MEASURE	ASTM TEST METHOD	1/4" SECUROCK® ROOF PANELS	3/8" SECUROCK® ROOF PANELS	1/2" SECUROCK® ROOF PANELS	5/8" SECUROCK® ROOF PANELS
Pieces per unit for 4' x 8' sheets	Pieces	na	50	40	30	24
Weight, nominal lb./unit, 4' x 8' sheet	Lbs.	na	2,575	2,575	2,350	2,525
Weight, nominal lb./sq. ft.	Psf	na	1.57	1.96	2.45	3.20
Flexural Strength	Lbf	C473	> 40	> 70	> 110	> 161
Compressive Strength	Psi, nominal	C473	1,800	1,800	1,800	1,800
Flute spanability	Psi	E661	2.625"	5"	8"	10"
Permeance	Perms	E96	30	26	26	24
Thermal	"R" value	C518	0.2	0.3	0.5	0.6
Coefficient of thermal expansion	Inches/inch•°F	E831	8.0X10-06	8.0X10-06	8.0X10-06	8.0X10-06
Linear variation with change in moisture	% RH	D1037	8.0X10-06	8.0X10-06	8.0X10-06	8.0X10-06
Water Absorption	% max	C473	< 10	< 10	< 10	< 10
Surface water absorption	Nominal grams	C473	1.6	1.6	1.6	1.6
Mold Resistance	0-10 scale	D3273	10 (no growth)	10 (no growth)	10 (no growth)	10 (no growth)
Bending Radius	Feet	na	25'	25'	25'	30'

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### 1.4 Product Composition

**Table 2: Material Composition**

MATERIAL	1/4" SECUROCK® BRAND ROOF BOARD	3/8" SECUROCK® BRAND ROOF BOARD	1/2" SECUROCK® BRAND ROOF BOARD	5/8" SECUROCK® BRAND ROOF BOARD
Gypsum	93%	93%	93%	93%
Paper Fiber	7%	7%	7%	7%
Additives	< 1%	< 1%	< 1%	< 1%
Sum	100%	100%	100%	100%

### 1.5 Product Manufacture

The manufacture of Securock® Brand Roof Board panels starts with the feeding of dry ingredients into a large mixer where these dry ingredients are mixed with water and wet additives. The slurry is transferred to a forming machine. The hydrating material is pressed to achieve the required caliper and then conveyed to a dryer where excess water is evaporated from the panel under mild drying conditions so as not to calcine the gypsum. After removal of excess water, the board is cut to its final size, packaging applied, and the resulting product is ready for shipment.

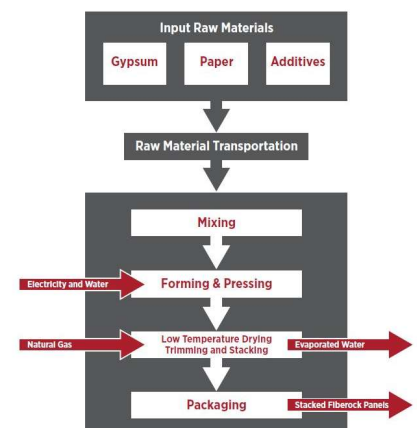
All Securock® Brand Roof Board panels not meeting quality control specifications are recycled on-site. Packaging consisted of cardboard edge protectors, pallet bags and wooden pallets.

### 1.6 Environment and Health During Manufacturing

USG has led the building sector's effort in developing and supplying sustainable construction materials. Today, sustainability is integrated into the design and manufacture of every wall, ceiling, and flooring product. As both a producer and a buyer of raw materials, we have a responsibility to extensively review and select each material we use. Each decision we make is based on careful consideration of environmental and safety effects over time. Raw materials used in our products are carefully selected and go through a screening procedure. Incoming raw materials are tested for contaminants by an internal lab and third-party labs for consideration of use and worker, environmental, and end-user exposure. This due diligence helps to ensure our products are safe to handle in our manufacturing plants and on job sites while having minimal impact on occupant health and indoor and outdoor environments.

### 1.7 Packaging

Packaging consists of cardboard edge protectors, pallet bags and wooden pallets. The production of these packaging materials was modeled in this study. The products under consideration are typically sold in the retail market as single panels or can be delivered in bundles of 30-50 pieces surrounded by cardboard edge protectors, a pallet surround on a wooden pallet.



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### 1.8 Reference Service Life

The Reference Service Life is considered not to be relevant for this cradle-to-gate study.

### 1.9 Extraordinary Effects

None

## 2. LCA Calculation Rules

### 2.1 Declared Unit

The declared unit for Securock® Brand Roof Board panels is defined as 1,000 square feet.

**Table 3: Functional Unit**

NAME	1/4" SECUROCK® BRAND ROOF BOARD PANELS (METRIC)	1/4" SECUROCK® BRAND ROOF BOARD PANELS (STANDARD)	3/8" SECUROCK® BRAND ROOF BOARD PANELS (METRIC)	3/8" SECUROCK® BRAND ROOF BOARD PANELS (STANDARD)	1/2" SECUROCK® BRAND ROOF BOARD PANELS (METRIC)	1/2" SECUROCK® BRAND ROOF BOARD PANELS (STANDARD)	5/8" SECUROCK® BRAND ROOF BOARD PANELS (METRIC)	5/8" SECUROCK® BRAND ROOF BOARD PANELS (STANDARD)
Functional Unit	92.9 m <sup>2</sup>	1,000 sf	92.9 m <sup>2</sup>	1,000 sf	92.9 m <sup>2</sup>	1,000 sf	92.9 m <sup>2</sup>	1,000 sf
Declared Thickness	0.660 cm	0.260 in	0.952 cm	0.375 in	1.27 cm	0.500 in	1.59 cm	0.625 in
Density	1,171 kg/m <sup>3</sup>	73.1 pcf	1,011 kg/m <sup>3</sup>	63.1 pcf	958 kg/m <sup>3</sup>	59.8 pcf	963 kg/m <sup>3</sup>	60.1 pcf
Surface weight per declared unit	7.44 kg/m <sup>2</sup>	1,523 lbs./MSF	9.62 kg/m <sup>2</sup>	1,971 lbs./MSF	1.22 kg/m <sup>2</sup>	2,492 lbs./MSF	1.53 kg/m <sup>2</sup>	3,128 lbs./MSF

### 2.2 System Boundary

This EPD represents a “cradle-to-gate” LCA analysis for Securock® Brand Roof Board. It covers all the production steps from raw material extraction (i.e., the cradle) to packaged panels on a pallet ready for shipment (gate).

### 2.3 Estimates and Assumptions

All raw material and energy data are specific to the manufacture of Securock® Brand panels produced at USG's Gypsum, OH plant. Data collection of energy and raw material inputs were aided by the presence of an extensive computer monitoring system which tracked product formulas and energy usages. The data is limited in that the primary data was collected during the 2018 year and changes in operations may increase/decrease impacts in the future. No changes in raw materials, product formulas or process changes are known at this time that would alter the results of this study. Other data limitations include the use of secondary data sets instead of primary data for upstream and

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downstream processes, local impacts vs. global impacts, possible impacts vs. actual impacts, inherent uncertainty in the data sets, accuracy and precision of impact assessment methodology, etc.

### 2.4 Cut-off Criteria

All inputs and outputs to a (unit) process were included in the calculation for which data is available.

In case of insufficient input data or data gaps for a unit process, the cut-off criteria was 1% of renewable and non-renewable primary energy usage and 1% of the total mass of that unit process. The total neglected input flows did not exceed 5% of energy usage and mass.

As such, some minor additives fell well below the cut-off criteria and were therefore not included in this study.

### 2.5 Background Data

All background was sourced from critically reviewed GaBi databases.

### 2.6 Data Quality

The LCA model was created using the GaBi ts software. Specific comments related to data quality requirements cited in ISO 14025 Section 4.2.3.6.2 include the following.

**Temporal:** In the case of Securock® Brand Roof Board Panels production, the LCI data was collected from the Gypsum, OH plant for the 2018 calendar year.

**Geographical:** Where possible, all processes were chosen as being representative of US manufacturing processes.

**Technical:** The data selected for this study is specific to the technology used in the preparation of the various raw materials.

**Precision:** The raw material usage amounts were derived from plant quality data on finished products, coatings usage plant data and product formulas.

**Completeness:** Virtually all the significant raw material flows (> 99%) used for panel production has been modeled. The exception consists of transportation of the coating raw materials; the effect of which was determined to be less than 1% of the total.

**Representative:** Where possible all the data sets were selected to be representative of US-based production, are less than 10 years in age and are representative of the technology being employed.

**Consistency:** All the manufacturing processes were modeled in a consistent manner throughout this study in accordance with the goal and scope definitions.

**Reproducibility:** The information contained in this study, including raw material, energy and transportation distance inputs, have been fully documented in the LCA report.

**Sources of Data:** The sources for the processes used in this study have been fully provided in the LCA report and are representative of the material and energy sources used in actual production.

**Uncertainty:** The relative uncertainty associated with this study has been minimized. No significant assumptions have been made.

### 2.7 Period under Review

All raw material and energy inputs are for the 2018 calendar year.



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### 2.8 Allocation

Energy inputs were allocated on a mass basis so that 100% of the purchased gas and electricity was allocated to specific types of products based on the mass of those products. Raw material inputs were allocated to specific products based on established product formulas.

### 2.9 Comparability

A comparison or evaluation of EPD data is only possible if all data sets to be compared are 1) created according to EN 15804 and 2) are considered in a whole building context or utilize identical defined use stage scenarios. Comparisons are only allowable when EPDs report cradle-to-grave information using a functional unit. Refer to section 5.3 of EN 15804 for further information. Comparison of the environmental performance of panels using EPD information shall be based on the product's use and impacts at the building level, and therefore EPDs may not be used for comparability purposes when not considering the building energy use phase as instructed under this PCR. Full conformance with the PCR for Gypsum Panel Products allows EPD comparability only when all stages of a panel life cycle have been considered. However, variations and deviations are possible.

## 3. Life Cycle Assessment Results

**Table 4: Description of the system boundary modules**

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES
Raw material supply	Transport	manufacturing	Transport from gate to site	Assembly/Install	Use Stage	maintenance	Repair	Replacement	Refurbishment <sup>1)</sup>	Operational Energy Use	Operational Water Use	Deconstruction	Transport	Waste Processing	Disposal	Reuse, Recovery, Recycling Potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	na	na	na	na	na	na	na	na	na	na	na	na	na	MND

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**Table 5: Acronym Key**

ABBREVIATION	PARAMETER	UNIT
<b>Life Cycle Impact Assessment Indicators</b>		
GWP	Global Warming Potential	kg CO <sub>2</sub> eq.
ODP	Ozone Depletion Potential	kg CFC-11 eq.
AP	Acidification Potential	kg SO <sub>2</sub> eq.
EP	Eutrophication Potential	kg N eq.
POCP	Photochemical ozone creation potential	kg O <sub>3</sub> eq.
ADP	Abiotic resource depletion potential – fossil fuels	MJ, LHV
<b>Resource Use Parameters</b>		
PERE	Use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ, net calorific value (LHV)
PERM	Use of renewable primary energy resources used as raw materials	MJ, net calorific value
PERT	Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ, net calorific value
PENRE	Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ, net calorific value
PENRM	Use of non-renewable primary energy resources used as raw materials	MJ, net calorific value
PENRT	Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ, net calorific value
SM	Use of secondary materials	kg
RSF	Use of renewable secondary fuels	MJ, net calorific value
NRSF	Use of non-renewable secondary fuels	MJ, net calorific value
FW	Net use of fresh water	m <sup>3</sup>
<b>Waste Parameters</b>		
HWD	Disposed-of-hazardous waste	kg
NHWD	Disposed-of non-hazardous waste	kg
RWD	Radioactive Waste Disposed	kg
<b>Output Flow Parameters</b>		
CRU	Components for reuse	kg
MFR	Materials for recycling	kg
MER	Materials for energy recovery	kg
EE	Exported energy	MJ



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### 3.1 Life Cycle Impact Assessment Results

Results are presented for 1000 square feet of Securock® Brand Roof Board Panels.

**Table 6: Impact Assessment Results for 1 MSF of 1/4" Securock® Brand Roof Board Panels**

TRACI v2.1	UNITS	A1	A2	A3
GWP 100	kg CO <sub>2</sub> eq.	2.32E+01	1.98E+01	1.95E+02
ODP	kg CFC-11 eq.	5.64E-10	-1.06E-13	-2.49E-11
AP	kg SO <sub>2</sub> eq.	1.03E+00	6.48E-02	2.15E-01
EP	kg N eq.	5.01E-03	5.92E-03	1.50E-02
POCP	kg O <sub>3</sub> eq.	1.01E+00	1.56E+00	5.07E+00
ADP	MJ, LHV	3.88E+01	3.74E+01	3.84E+02

**Table 7: Impact Assessment Results for 1 MSF of 3/8" Securock® Brand Roof Board Panels**

TRACI v2.1	UNITS	A1	A2	A3
GWP 100	kg CO <sub>2</sub> eq.	2.41E+01	2.55E+01	2.38E+02
ODP	kg CFC-11 eq.	6.60E-10	-1.37E-13	-3.19E-11
AP	kg SO <sub>2</sub> eq.	1.06E+00	8.35E-02	2.56E-01
EP	kg N eq.	5.62E-03	7.64E-03	1.75E-02
POCP	kg O <sub>3</sub> eq.	1.08E+00	2.02E+00	6.24E+00
ADP	MJ, LHV	4.25E+01	4.83E+01	4.89E+02

**Table 8: Impact Assessment Results for 1 MSF of 1/2" Securock® Brand Roof Board Panels**

TRACI v2.1	UNITS	A1	A2	A3
GWP 100	kg CO <sub>2</sub> eq.	2.41E+01	3.23E+01	2.92E+02
ODP	kg CFC-11 eq.	8.03E-10	-1.74E-13	-4.01E-11
AP	kg SO <sub>2</sub> eq.	1.04E+00	1.05E-01	3.10E-01
EP	kg N eq.	6.13E-03	9.64E-03	2.10E-02
POCP	kg O <sub>3</sub> eq.	1.12E+00	2.55E+00	7.69E+00
ADP	MJ, LHV	4.51E+01	6.10E+01	6.14E+02

**Table 9: Impact Assessment Results for 1 MSF of 5/8" Securock® Brand Roof Board Panels**

TRACI v2.1	UNITS	A1	A2	A3
GWP 100	kg CO <sub>2</sub> eq.	2.45E+01	4.05E+01	3.64E+02
ODP	kg CFC-11 eq.	9.50E-10	-2.18E-13	-5.02E-11
AP	kg SO <sub>2</sub> eq.	1.04E+00	1.32E-01	3.85E-01
EP	kg N eq.	6.72E-03	1.21E-02	2.60E-02
POCP	kg O <sub>3</sub> eq.	1.17E+00	3.19E+00	9.59E+00
ADP	MJ, LHV	4.80E+01	7.66E+01	7.69E+02

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### 3.2 Life Cycle Inventory Results

**Table 10: Resource Use for 1 MSF of Securock® Brand Roof Board Panels**

PARAMETER	UNITS	1/4" SECUROCK® BRAND ROOF BOARD PANELS	3/8" SECUROCK® BRAND ROOF BOARD PANELS
PERE	MJ, LHV	1.98E+02	2.13E+02
PERM	MJ, LHV	0.00E+00	0.00E+00
PERT	MJ, LHV	1.98E+02	2.13E+02
PENRE	MJ, LHV	3.89E+03	4.73E+03
PENRM	MJ, LHV	0.00E+00	0.00E+00
PENRT	MJ, LHV	3.89E+03	4.73E+03
SM	MJ, LHV	6.65E+02	8.63E+02
RSF	MJ, LHV	0.00E+00	0.00E+00
NRSF	MJ, LHV	0.00E+00	0.00E+00
FW	m <sup>3</sup>	3.86E+00	4.93E+00

**Table 11: Resource Use for 1 MSF of Securock® Brand Roof Board Panels**

PARAMETER	UNITS	1/2" SECUROCK® BRAND ROOF BOARD PANELS	5/8" SECUROCK® BRAND ROOF BOARD PANELS
PERE	MJ, LHV	2.92E+02	2.52E+02
PERM	MJ, LHV	0.00E+00	0.00E+00
PERT	MJ, LHV	2.92E+02	2.52E+02
PENRE	MJ, LHV	5.76E+03	7.10E+03
PENRM	MJ, LHV	0.00E+00	0.00E+00
PENRT	MJ, LHV	5.76E+03	7.10E+03
SM	MJ, LHV	1.09E+03	1.37E+03
RSF	MJ, LHV	0.00E+00	0.00E+00
NRSF	MJ, LHV	0.00E+00	0.00E+00
FW	m <sup>3</sup>	6.19E+00	7.75E+00

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**Table 12: Output Flows and Waste Categories for 1 MSF of Securock® Brand Roof Board Panels**

PARAMETER	UNITS	1/4" SECUROCK® BRAND ROOF BOARD PANELS	3/8" SECUROCK® BRAND ROOF BOARD PANELS
HWD	kg	5.73E-06	6.87E-06
NHWD	kg	5.86E+00	6.23E+00
RWD	kg	0.00E+00	0.00E+00
CRU	kg	0.00E+00	0.00E+00
MFR	kg	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00
EE	MJ, LHV	0.00E+00	0.00E+00

**Table 13: Output Flows and Waste Categories for 1 MSF of Securock® Brand Roof Board Panels**

PARAMETER	UNITS	1/2" SECUROCK® BRAND ROOF BOARD PANELS	5/8" SECUROCK® BRAND ROOF BOARD PANELS
HWD	kg	8.13E-06	9.69E-06
NHWD	kg	6.48E+00	6.91E+00
RWD	kg	0.00E+00	0.00E+00
CRU	kg	0.00E+00	0.00E+00
MFR	kg	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00
EE	MJ, LHV	0.00E+00	0.00E+00

### 3.3 LCA Interpretation

The LCA results for the production of 1 MSF of Securock® Brand Roof Board Panels were dominated by energy usage; primarily gas and electricity usage during the drying process.

### 4. Further Information

None

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### 5. References

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#### LCA Report

A Cradle-to-Gate (A1-A3) Life Cycle Assessment of USG Fiberock® and Securock® Panels, December 2, 2019. USG.

#### PCR

NSF, "Product Category Rules for Gypsum Panel Products", Valid to July 17, 2024

#### SUSTAINABILITY REPORTING STANDARDS

EN 15804: 2012-04 - Sustainability of construction works — Environmental Product Declarations — Core rules for the product category of construction product.

ISO 14025: 2006 - Environmental labels and declarations — Type III environmental declarations — Principles and procedures

ISO 14040: 2006 - Environmental management – Life cycle assessment – Principles and framework

ISO 14044:2006 - Environmental management – Life cycle assessment – Requirements and guidelines

ISO 14046:2013 - Environmental management- Water footprint- Principles, requirements and guidelines

ISO 15392:2008 - Sustainability in building construction- General principles

ISO 15686-1:2011 - Buildings and constructed assets- Service life planning- Part 1: General principles

ISO 15686-2:2008 - Buildings and constructed assets- Service life planning Part 2: Service life prediction procedures

ISO 15686-7:2008 - Buildings and constructed assets- Service life planning Part 7: Performance evaluation for feedback of service life data from practice

ISO 15686-8:2008 - Buildings and constructed assets- Service life planning Part 8: Reference service life and service life estimation

ISO 21930: 2007 - Sustainability in building construction -- Environmental declaration of building products