ENVIRONMENTAL PRODUCT DECLARATION

1” MARS™ HIGH-NRC (80/40) AND MARS™ HEALTHCARE HIGH-NRC (80/40)

WITH CLIMAPLUS™ PERFORMANCE WITH PLANT-BASED BINDER

Mars™ High-NRC Acoustical Ceiling Panels are designed to offer the highest standard in noise reduction (NRC) or noise isolation (CAC). Fine-textured and mold resistant, they offer superior sag resistance and high light reflectance values. Their durability, performance and attractiveness make them an ideal choice for an array of spaces. These products provide the industry’s best visual and balanced acoustic performance solution on the market.

USG

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 and usgdesignstudio.com

UL CERTIFIED ENVIRONMENTAL PRODUCT DECLARATION UL.COM/EPD

ENVIRONMENTAL PRODUCT DECLARATION

1" Mars™ High-NRC (80/40) and 1" Mars™ Healthcare High-NRC (80/40)
Acoustical Ceiling Panels

According to ISO 14025, ISO 21930:2007 and EN 15804

This declaration is an environmental product declaration (EPD) in accordance with ISO 14025. 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.

PROGRAM OPERATOR	UL Enivironment
DECLARATION HOLDER	USG
DECLARATION NUMBER	4788655768.104.1
DECLARED PRODUCT	1" Mars High-NRC (80/40) and 1" Mars Healthcare High-NRC (80/40) Acoustical Ceiling Panels
REFERENCE PCR	UL Part B: Non-metal Ceiling Panel October 2015-v.1
DATE OF ISSUE PERIOD OF VALIDITY	April 1, 2019 5 Years
CONTENTS OF THE DECLARATION	Product definition and information about building physics Information about basic material and the material's origin Description of the product's manufacture Indication of product processing Information about the in-use conditions Life cycle assessment results Testing results and verifications

The PCR review was conducted by:	UL Environment PCR Peer Review Panel epd@ulenvironment.com
This declaration was independently verified in accordance with ISO 14025 by Underwriters Laboratories ☐ INTERNAL ☒ EXTERNAL	Grant R. Martin Grant R. Martin, UL Environment
This life cycle assessment was independently verified in accordance with ISO 14044 and the reference PCR by:	Thomas P. Gloria Thomas P. Gloria, Industrial Ecology Consultants

This EPD conforms with ISO 21930:2007 and EN 15804

1. Product System Documentation

1.1. Product Description

Product Identification

Mars™ High-NRC Acoustical Ceiling Panels are manufactured using a unique process that maximizes sound and anti-sag performance, producing excellent noise reduction coefficient (up to .90) and solid ceiling attenuation class (CAC) performance.

The wet-formed mineral fiber family of products consists of a latex/starch-bound mineral wool basemat optionally laminated with a non-woven veil. These products generally fall under ASTM E1264 Section 5.2 designation as Type III—Mineral base with membrane-faced overlay or 5.2.11 Type XI—Mineral base with fabric-faced overlay. This EPD covers the following 1" Mars™ High-NRC/High-CAC 80/40 and 1" Mars™ Healthcare High-NRC/High-CAC 80/40 Acoustical Panels: Item nos.: 86345, 88345, 86346, 88346, 88347,86115, 88115, 86343, 86344 and 88344

1.2. Application

The products covered by this EPD are designed to be installed in a suitable metal grid system typically designed to accommodate a nominal 2'x2' or 2'x4' panel although other sizes are available.

1.3. Technical Data

Table 1: Technical Specifications

NAME	TEST METHOD	MARS™ HIGH-NRC (80/40)	MARS™ HEALTHCARE HIGH-NRC (80/40)
Noise Reduction Coefficient (NRC)	**C423**	0.80	0.80
Articulation Class (AC)	**E1111 and Classification E1110**	N/A	N/A
Ceiling Attenuation Class (CAC)	**E1414 and Classification E413**	40	40
Fire Rating	**E84**	Class A	Class A
Light Reflection	**E1477**	0.90	0.90

1.4. Placing on the Market / Application Rules

The respective standard and general technical approval for these products are indicated above. Further detail may be found on the USG.com website.

1.5. Delivery Status

Mars Healthcare and Mars High-NRC panels (80/40) (e.g., Item No. 87200; 2'x2'x7/8" SLT Class A panels) arrive at the jobsite in a shrink-wrapped wrap- around carton.

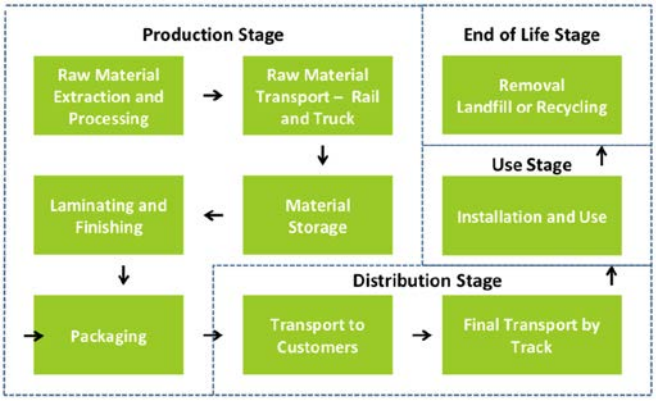
1.6. Base Materials

Table 2: Material Composition

MATERIAL	MARS™ HIGH-NRC (80/40)	MARS™ HEALTHCARE HIGH-NRC (80/40)
Basemat	89.2%	89.0%
Adhesive	0.70%	0.70%
Mars Veil	2.13%	2.13%
Dry coating	8.00%	8.14%
Sum	**100%**	**100%**

1.7. Manufacture

In wet-formed mineral fiber production, the tile ingredients are mixed into a dilute slurry, which is then formed onto a wire as a basemat. The base mats are then pressed and dried. The dried tiles are optionally laminated, cut or trimmed into the appropriate sizes and painted. Painting may involve two or more coatings with a drying cycle between coatings. After inspection, the ceiling tiles are packaged for shipment. Panel trim and panels that are chipped or broken during manufacturing (referred to as "broke") are recycled and returned to the process. The finishing unit processes are dominated by the use of water-based paint, which contains ingredients such as calcium carbonate, clay, latex, titanium dioxide (TiO_2) and other chemicals. Shrink-wrap and corrugated strip are used as packing materials.



1.8. Environment and Health During Manufacturing

All appropriate equipment required by federal, state and local regulations are in place at all USG manufacturing facilities.

1.9. Installation

The ceiling panels must be installed in accordance with all applicable USG Interiors installation guidelines. Approved installation procedures are provided in the Ceiling Systems Handbook published by the Ceiling and Interior Systems Construction Association and must be followed. Installation of USG's ceiling and grid products is accomplished by manual labor using mostly hand tools. No material or energy inputs are required on the jobsite.

1.10. Packaging

USG Interiors ceiling panels are packaged using cardboard sleeves and are then wrapped in plastic shrink wrap. USG encourages the proper recycling of these packaging materials. Both the production and disposal of these packaging materials was modeled in this study.

1.11. Conditions of Use

To insure the longevity of the product, panels should not be exposed to moisture, high humidity or high temperature. Criteria can be found in the USG warranty information specific for each product.

1.12. Environment and Health During Use

This product is not expected to produce any unusual hazards during normal use. Exposure to high dust levels may irritate the skin, eyes, nose, throat, or upper respiratory tract. Proper personal protective gear should be worn by installer for protection.

1.13. Reference Service Life

A default RSL of 75 years shall be assumed for the product and ceiling panel mounting system. An assumed Estimated Service Life (ESL) of 75 years shall be used for building life.

1.14. Extraordinary Effects

Fire

All ceiling products covered by this EPD are certified to be Class A (flame spread of 25 or less, smoke developed of 50 or less per ASTM C84).

Water

Moisture must not come in contact with the ceiling panel as a result of a leaking roof, a sweating pipe, a leaking radiator, a flood, condensation on windows, condensation on more subtle surfaces where dew points are reached, humidified air from the HVAC system or any other similar causes.

Mechanical Destruction

The product must be installed and maintained in accordance with current USG written instructions and best industry practice, including the CISCA Handbook and ASTM C636, "Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels."

1.15. Re-Use Phase

With proper care, ceiling panels may be reused at the end of a building's life.

1.16. Disposal

USG is helping to meet the needs of a growing world and preserve natural resources by taking back approved ceiling panels from any manufacturer and recycling them into new building products. While USG encourages recycling of its ceiling panels through its take back program, all ceiling panel waste generated during installation and at end-of-life is assumed to be disposed of in an appropriate landfill.

2. LCA Calculation Rules

2.1. Declared Unit

The declared unit for ceiling panels is defined as one square meter with optional reporting of one square foot (12"x12") of ceiling panel.

Table 3: Declared Unit

NAME	MARS™ HIGH-NRC (80/40) (METRIC)	MARS™ HIGH-NRC (80/40) (STANDARD)	MARS™ HEALTHCARE HIGH-NRC (80/40) (METRIC)	MARS™ HEALTHCARE HIGH-NRC (80/40) (STANDARD)
Declared Unit	**0.093 m^2**	**1 ft^2**	**0.093 m^2**	**1 ft^2**
Declared Thickness	**2.70 cm**	**1.065 in**	**2.70 cm**	**1.065 in**
Density	**225.882 kg/m^3**	**14.1 pcf**	**225.882 kg/m^3**	**14.1 pcf**
Surface weight per declared unit	**6.11 kg/m^2**	**1.25 lb/ft^2**	**6.11 kg/m^2**	**1.25 lb/ft^2**

For purposes of defining a functional unit, an ESL of a building in North America of 75 years shall be used.

2.2. System Boundary

This EPD represents a "cradle-to-grave" LCA analysis for wet-formed mineral fiber ceiling panels. It covers all the production steps from raw material extraction (i.e., the cradle) to end of life disposal (grave).

2.3. Estimates and Assumptions

In the case of the wet-formed mineral fiber ceiling panel production at the Cloquet, MN plant, data collection of energy and raw material inputs were aided by the presence of an extensive computer monitoring system which tracked product formulas by product type. All wet-formed mineral fiber ceiling product raw material and energy inputs are specific to the specific wet-formed mineral fiber product produced at the Cloquet, MN plant.

Additional data limitations include the use of proxy processes rather than actual supplier generated primary data. This would include such processes as starch, which is representative of wet-milled corn starch but may not necessarily be representative of USG's particular starch supplier. In addition, the data is limited in that the primary data was collected during the 2017 year and changes in operations may increase/decrease impacts in the future. Other data limitations include the use of secondary data sets instead of primary data for upstream and 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 that 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 wet-formed mineral fiber ceiling tile production, the LCI data was collected from the Cloquet, MN plant for the 2017 production 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%) in wet-formed mineral fiber ceiling 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 2017 calendar year.

2.8. Allocation

Energy inputs were allocated on a mass basis so that 100% of the gas and electricity used in wet-formed mineral fiber ceiling panel production were allocated to specific types of ceiling panel 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 ceiling 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 North American Ceiling Panels allows EPD comparability only when all stages of a ceiling panel life cycle have been considered. However, variations and deviations are possible.

3. LCA: Scenarios and additional technical information

Table 4: Transport to the building site (A4)

NAME	VALUE	UNIT
Fuel type	Diesel	-
Liters of fuel	1.59	l/100km
Vehicle type	US Truck	-
Transport distance	1609	km
Capacity	0.67	
Gross density of products transported	226	kg/m^3

Table 5. Installation into the building (A5)

NAME	VALUE	UNIT
Ancillary materials	0	kg
Net freshwater consumption specified by water source and fate	0	m^3
Other resources	0	kg
Electricity consumption	0	kWh
Other energy carriers	0	MJ
Material loss	10% of delivered weight	%
Ceiling Panel Mounting System (CPMS)	~ 180	kg/MSF
Output substances following waste treatment on site	10% of delivered weight	%
Dust in the air	~ 0	kg
VOC content	< 9	µg/m^3

Table 6. Use or application of the installed product (B1)

NAME	VALUE	UNIT
RSL	75	years
VOC	< 9	µg/m^3

Table 7. Maintenance (B2)

NAME	VALUE	UNIT
Maintenance process information	As required by the PCR, a standard Life expectancy for ceiling panels based on historic practices of 75 years shall be used. No maintenance is required.	
Maintenance cycle	0	Number/ RSL
Maintenance cycle	0	Number/ ESL
Water consumption	0	m^3
Auxiliary	0	kg
Other resources	0	kg
Electricity consumption	0	kWh
Other energy carriers	0	MJ
Material loss	0	kg

Table 8. End of life (C1-C4)

NAME		MARS™ HIGH-NRC (80/40)	MARS™ HEALTHCARE HIGH-NRC (80/40)	UNIT
Collection process (specified by type)	Collected separately	0	0	kg
	Collected with mixed construction waste	567.6	567.6	kg/MSF
Recovery (specified by type)	Reuse	0	0	kg
	Recycling	0	0	kg
	Landfill	567.6	567.6	kg/MSF
	Incineration	0	0	kg
	Incineration with energy recovery	0	0	kg
	Energy conversion efficiency rate	0	0	-
Disposal	Product or material for final deposition	567.6	567.6	kg/MSF
Removals of biogenic carbon (excluding packaging)		0		0

4. Life Cycle Assessment Results

Table 9: Description of the system boundary modules

PRODUCT STAGE			CONSTRUCT-ION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARY
A1	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Raw material supply	Transport	Manufacturing	Transport from gate to site	Assembly/Install	Use	Maintenance	Repair	Replacement	Refurbishment	Building Operational Energy Use During Product Use	Building Operational Water Use During Product Use	Deconstruction	Transport	Waste processing	Disposal	Reuse, Recovery, Recycling Potential
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	MND

Table 10: Acronym Key

ABBREVIATION	PARAMETER	UNIT
	Life Cycle Impact Assessment Indicators	
GWP	Global Warming Potential	kg CO_2 eq.
ODP	Ozone Depletion Potential	kg CFC-11 eq.
AP	Acidification Potential	kg SO_2 eq.
EP	Eutrophication Potential	kg N eq.
POCP	Photochemical ozone creation potential	kg O_3 eq.
ADP	Abiotic resource depletion potential – fossil fuels	MJ, LHV
	Resource Use Parameters	
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	m3
	Waste Parameters	
HWD	Disposed-of-hazardous waste	kg
NHWD	Disposed-of non-hazardous waste	kg
RWD	Radioactive Waste Disposed	kg
	Output Flow Parameters	
CRU	Components for reuse	kg
MFR	Materials for recycling	kg
MER	Materials for energy recovery	kg
EE	Exported energy	MJ

4.1. Life Cycle Impact Assessment Results

Results are presented for 1000 square feet of ceiling panels.

Table 11: North American Impact Assessment Results for 1" Mars™ High-NRC (80/40)

TRACI v2.1	Units	A1-A3	A4-A5	B1-B7	C1-C4
GWP 100	kg CO_2 eq.	7.66E+02	9.32E+01	0.00E+00	1.63E+01
ODP	kg CFC-11 eq.	4.17E-06	3.31E-12	0.00E+00	2.26E-12
AP	kg SO_2 eq.	2.42E+00	4.04E-01	0.00E+00	9.00E-02
EP	kg N eq.	2.47E-01	3.36E-02	0.00E+00	7.54E-03
POCP	kg O_3 eq.	3.48E+01	1.32E+01	0.00E+00	2.18E+00
ADP	MJ, LHV	1.20E+03	1.74E+02	0.00E+00	2.83E+01

Table 12: North American Impact Assessment Results for 1" Mars™ Healthcare High-NRC (80/40)

TRACI v2.1	Units	A1-A3	A4-A5	B1-B7	C1-C4
GWP 100	kg CO_2 eq.	7.64E+02	9.32E+01	0.00E+00	1.63E+01
ODP	kg CFC-11 eq.	4.17E-06	3.31E-12	0.00E+00	2.26E-12
AP	kg SO_2 eq.	2.44E+00	4.04E-01	0.00E+00	9.00E-02
EP	kg N eq.	2.80E-01	3.36E-02	0.00E+00	7.54E-03
POCP	kg O_3 eq.	3.53E+01	1.32E+01	0.00E+00	2.18E+00
ADP	MJ, LHV	1.22E+03	1.74E+02	0.00E+00	2.83E+01

4.2. Life Cycle Inventory Results

Table 13: Resource Use for 1" Mars™ High-NRC (80/40)

Parameter	Units	A1-C4
PERE	MJ, LHV	4.21E-01
PERM	MJ, LHV	2.29E+01
PERT	MJ, LHV	9.43E+02
PENRE	MJ, LHV	4.89E+01
PENRM	MJ, LHV	5.18E+02
PENRT	MJ, LHV	1.62E+04
SM	MJ, LHV	4.81E+02
RSF	MJ, LHV	0.00E+00
NRSF	MJ, LHV	0.00E+00
FW	m^3	4.92E+00

Table 14: Resource Use for 1" Mars™ Healthcare High-NRC (80/40)

Parameter	Units	A1-C4
PERE	MJ, LHV	4.21E-01
PERM	MJ, LHV	2.29E+01
PERT	MJ, LHV	1.07E+03
PENRE	MJ, LHV	4.89E+01
PENRM	MJ, LHV	5.18E+02
PENRT	MJ, LHV	1.63E+04
SM	MJ, LHV	4.81E+02

RSF	MJ, LHV	0.00E+00
NRSF	MJ, LHV	0.00E+00
FW	m^3	5.73E+00

Table 15: Output Flows and Waste Categories for 1" Mars™ High-NRC (80/40)

PARAMETER	UNITS	A1-C4
HWD	kg	8.45E-04
NHWD	kg	1.67E+03
RWD	kg	2.50E-01
CRU	kg	0.00E+00
MFR	kg	0.00E+00
MER	kg	0.00E+00
EE	MJ, LHV	0.00E+00

Table 16: Output Flows and Waste Categories for 1" Mars™ Healthcare High-NRC (80/40)

PARAMETER	UNITS	A1-C4
HWD	kg	8.45E-04
NHWD	kg	1.68E+03
RWD	kg	2.50E-01
CRU	kg	0.00E+00
MFR	kg	0.00E+00
MER	kg	0.00E+00
EE	MJ, LHV	0.00E+00

5. LCA Interpretation

The LCA results for the production of wet-formed mineral fiber ceiling panels were dominated by energy usage; primarily gas usage during the drying process. Drying energy was the key input influencing the LCA measures.

6. Further Information

6.1 Biopersistence of Mineral Wool Fibers

Slag wool fiber, based on its solubility and particle size, has been classified in 2001 as "not classifiable as to its carcinogenecity to humans" (Group 3) by the International Agency for Research on Cancer (IARC). The mineral slag wool fiber is exonerated from classification as a carcinogen in accordance with Note Q in the EU Commission Directive 97/69/EC. Primary routes of exposure are inhalation, eyes, and skin. Follow installation instructions and MSDS to reduce any effects.

6.2 VOC Emissions

USG certifies that all the wet-formed mineral fiber products covered by this EPD are Low-Emitting, defined as below the emissions of the concentrations for each individual volatile organic compound as specified in the Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions for Indoor Sources using Environmental Chambers Version 1.1 [CDPH/EHLB/Standard Method V1.1 (February 2010); aka, chamber testing portion of CA Section 01350] and ASTM Guide D5116-06. Additional information can be obtained at USG.com, USGDesignStudio.com.

7. References

LCA Report

LCA Report for USG Wet-formed Mineral Fiber Products. August 28 2018. USG.

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UL Environment General Program Instructions April 2015, version 2

PCR Part A: UL Environment and Institute of Construction and Environment e.V., Königswinter (pub.): Product Category Rules for Construction Products from the range of Environmental Product Declarations of Institut Bauen und Umwelt (IBU), Part A: Calculation Rules for the Life Cycle Assessment and Requirements on the Project Report. July 2014, version 1.3

UL Environment: PCR Guidance for Building-Related Products and Services; Part B: Non-Metal Ceiling Panel EPD Requirements; October 2015, version 1

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