

## ENVIRONMENTAL PRODUCT DECLARATION In accordance with EN 15804 and ISO 14025

# 12.5 mm Gyproc Habito

Date of issue : 24<sup>th</sup> April 2017 Valid until : 24<sup>th</sup> April 2022



The environmental impacts of this product have been assessed over its whole life cycle. Its Environmental Product Declaration has been verified by an independent third party.

DECLARATION NUMBER S-P 00839 ECO EPD reference number: 00000514







### **1. General information**

# Manufacturer: Saint-Gobain Construction Products United Kingdom Limited trading as British Gypsum

**Programme used:** The International EPD<sup>®</sup> System. For more information see www.environdec.com **EPD registration number/declaration number:** S-P-00839

**PCR identification:** EN 15804 as the core PCR + The International EPD<sup>®</sup> System PCR 2012:01 version 2.1 for Construction Products and CPC 54 construction services.

**Product / product family name and manufacturer represented:** Gyproc Habito Plasterboard **Declaration issued:** 24<sup>th</sup> April 2017, **valid until:** 24<sup>th</sup> April 2022

**Owner of the declaration:** BPB United Kingdom Limited trading as British Gypsum, Saint-Gobain House, Binley Business Park, Coventry. CV3 2TT

EPD Prepared by: Gyproc Central SHEAR

**Scope:** The LCA is based on 2016 production data for one site in the United Kingdom for Gyproc Habito for use in Norway, Sweden, Denmark and Finland. The production site is Sherburn-in-Elmett, North Yorkshire, UK. This EPD covers information modules A1 to D (cradle to gate with options) as defined in EN 15804:2012.

### **CPC Number:** 37520

The declared unit is 1 m<sup>2</sup> of 12.5 mm thick Gyproc Habito with a weight of 12 kg/m<sup>2.</sup> and a density of 984 kg/m<sup>3</sup>.

EPD of construction products may not be comparable if they do not comply with EN15804.



CEN standard EN 15804 serves as the core PCR <sup>a</sup>	
PCR:	PCR 2012:01 Construction products and Construction services, Version 2.1, 2015- 03-03
PCR review was conducted by:	The Technical Committee of the International EPD® System. Chair: Massimo Marino. Contact via info@environdec.com
Independent verification of the declaration, according to EN ISO 14025:2010 Internal External	
Third party verifier <sup>b</sup> : Dr Andrew Norton, Renuables	
<sup>a</sup> Product Category Rules	
<sup>b</sup> Optional for business-to-business communication; mandatory for business to consumer communication (see EN ISO 14025:2010, 9.4)	

### 2. Product description

### 2.1 Product description

Gyproc Habito consists of gypsum encased in paper liners. Gyproc Habito features a high strength engineered core which provides enhanced levels of strength, durability and fixability. Small quantities of chopped glass fibre, micro silica and vermiculite may be added with starch, foam and dispersants.

Designed for use in the residential sector, Gyproc Habito enables end users to fix heavy and difficult items such as shelves, curtain poles and TVs, into place without any need for drills or specialist fixings; simply screw straight into the wall surface.

Suitable for direct decoration or plaster finish..

This plasterboard is one of our products within our range that is certified to BES 6001, achieving a rating of 'Excellent'.

### 2.2 Application

Designed for use in Gyproc wall and partitions systems where greater levels of impact/duty and fixing capability are required.

#### 2.3 Technical data

Gyproc Habito conforms to EN520:2004, A1:2009 Gypsum Plasterboards, definitions, requirements and test methods

Type A: Gypsum plasterboard

Plasterboard with a face to which suitable gypsum plasters or decoration may be applied.

EN CLASSIFICATION	EN 13501-1: 2007 & A1:2009
GROSS DENSITY	984 kg/m <sup>3</sup>
CLASS OF REACTION TO FIRE PERFORMANCE	A2-s1, d0

### **Certifications:**

ISO 9001:2008 Quality Management System ISO 14001:2004 Environmental Management System ISO 50001:2011 Energy Management System BES 6001:Issue 2 Responsible Sourcing of Construction Products BS OHSAS 18001:2007 Occupational Health and Safety Management

### 2.4 Placing on the market/Application rules

Gyproc Habito conforms to EN520:2004, A1:2009 Gypsum Plasterboards, definitions, requirements and test methods Type A: Gypsum plasterboard Plasterboard with a face to which suitable gypsum plasters or decoration may be applied.

### 2.5 Delivery status

The EPD refers to  $1 \text{ m}^2$  of  $12 \text{ kg/m}^2$  Gyproc Habito.

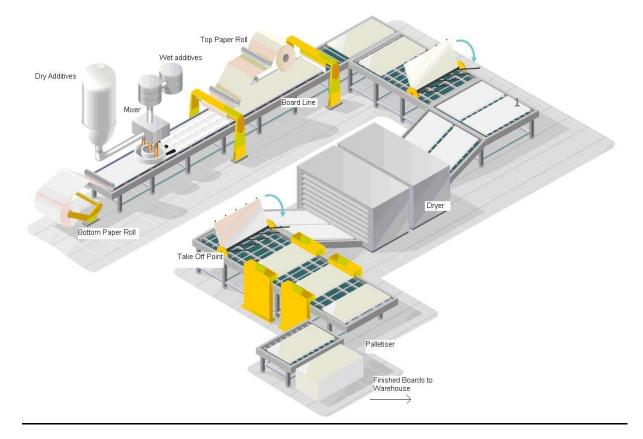
### 2.6 Base materials/Ancillary materials

PARAMETER	PART	QUANTITY (kg/FU)
GYPSUM	96.08%	11.529 kg
ADDITIVES	3.92%	0.4704 kg
TOTAL	100%	12
PACKAGING: WOODEN PALLET	0.35kg per m <sub>2</sub> Habito	

Gyproc Habito contains 96.08% gypsum as De sulphurised Gypsum

No additives used are classed as substances of concern, but as proprietary information they are not listed specifically.

### 2.7 Manufacture



The initial materials are homogenously mixed to form a gypsum slurry that is spread via multiple hose outlets onto a paper liner on a moving conveyor belt. A second paper liner is fed onto the production line from above to form the plasterboard. The plasterboard continues along the production line where it is finished, dried, and cut to size.

British Gypsum plants are managed through ISO9001:2008 certified Quality Management Systems.

### 2.8 Environment and health during manufacture

At British Gypsum, Health and Safety is our core value. The Company's aim is always to be injuryfree. A target of zero accidents at work for employees, visitors and contractors is set by the business.

In all aspects of the Company's activities, the Health and Safety at Work Act and relevant Regulations and Codes of Practice are complied with. In addition there are a number of definitive Company Safety Procedures and together these determine the minimum standards expected by the Company. In order to achieve this, close co-operation with representatives of the relevant enforcement agencies is ensured.

British Gypsum plants are managed through BS OHSAS 18001:2007 Occupational Health and Safety Management Systems. To ensure that the Company's objectives are achieved, documented safety management systems are employed at each operational site and within the central functions. These include a systematic identification of hazards, assessment of the risks and the development of safe systems of work to eliminate or reduce any risks to an acceptable level. Audits and inspections are used to monitor standards of safety management, adherence to the law and company procedures.

British Gypsum plants are managed through ISO 14001:2004 certified Environmental Management Systems.

Saint-Gobain launched a Group-wide Water Policy in 2011. The aim of the policy is to extract minimum resources and work towards 'zero discharge' of industrial process water in liquid form, while avoiding the creation of new impacts on other environments or stakeholders.

### 2.9 Product processing/Installation

### General

It is important to observe appropriate health and safety legislation when working on site, i.e. personal protective clothing and equipment, etc. The following notes are intended as general guidance only. In practice, consideration must be given to design criteria requiring specific project solutions.

### Handling

Take care to avoid unnecessary strain. For further information please refer to the Manual Handling section of The Site Book or the Manual Handling Guide, available to download from http://british-gypsum.com

### Cutting

This product may be cut using a plasterboard saw or by scoring with a sharp knife and snapping the board over a straight edge. Holes for switch or socket boxes should be cut out before the boards are fixed using a utility saw or sharp knife. When cutting boards, power and hand tools should be used with care and in accordance with the manufacturers' recommendations. Power tools should only be used by people who have been instructed and trained to use them safely. Appropriate personal protective equipment should be used.

### Fixing

Fix boards with decorative side out to receive joint treatment or a skim plaster finish. Lightly butt boards together. Never force boards into position. Install fixings not closer than 13mm from cut edges and 10mm from bound edges. Position cut edges to internal angles whenever possible, removing paper burrs with fine sandpaper. Stagger horizontal and vertical board joints between layers by a minimum of 600mm. Locate boards to the centre line of framing where this supports board edges or ends.

### 2.10 Packaging

Gyproc Habito is supplied on returnable 100% recyclable pallets. All pallets are FSC certified.

### 2.11 Condition of use

When installed in accordance with Gyproc recommendations, Gyproc Habito maintains its mechanical and physical properties for its entire useful life. Direct contact with water should be avoided.

### 2.12 Environment and health during use

Gyproc Habito is an article and not classified according to CLP.

### 2.13 Reference service life

Gyproc Habito is expected to last the service life of a building (60 years), as documented in Code for Sustainable Homes.

### 2.14 Extraordinary effects

### Fire

The surfaces of Gyproc Habito are designated Class 0 and (for the purposes of the national Building Regulations, UK Building Regulations, 2006, Approved Document B).

### Water

Gyproc Habito is unsuitable for use in areas subject to continuously damp or humid conditions and must not be used to isolate dampness. Specialist boards are not suitable for use in temperatures above 49°C, but can be subjected to freezing conditions without risk of damage.

### Mechanical destruction

Gyproc Habito is intended for residential and commercial applications and is a stable product with no significant adverse environmental effects. The products should be installed according to British Gypsum's installation guidelines.

Also refer to section 2.3 Technical data.

### 2.15 Re-use phase

Gyproc Habito can be recycled.

### 2.16 Disposal

Waste from gypsum specialist boards is normally classified as 'non-hazardous, non-inert' and is fully recyclable. Please refer to the British Gypsum Plasterboard Recycling service literature or contact the Plasterboard Recycling Customer Service Centre for details. Other methods of disposal are available. If a container of gypsum is sent to landfill, it must be deposited in a separate Monocell. The European waste catalog code is 17 08 02. Always seek the advice of a trained and competent professional.

### 2.17 Further information

British Gypsum, East Leake, Loughborough, Leicestershire. LE12 6HX 0115 945 1000 http://www.british-gypsum.com

# 3. LCA calculation rules

3.1	FUNCTIONAL UNIT / DECLARED UNIT	The declared unit is 1m <sup>2</sup> of Gyproc Habito weighing 12kg/m <sup>2</sup> and with a thickness of 12.5mm and a thickness of 984 kg/m <sup>3</sup> .
3.2	SYSTEM BOUNDARIES	Cradle to Grave: Mandatory stages = A1-3, A4-5, B1-7, C1-4, D.
3.3	ESTIMATES AND ASSUMPTIONS	Primary data was gathered from the only production site in the UK. The distance to a waste disposal site is assumed to be 32km from all waste generating sites included in the LCA.
3.4	CUT-OFF RULES	Data for recycled waste (waste that isn't landfilled or incinerated) is not included in this model, only the transport to the waste recycling centre. This is due to recycled waste being considered as the start of a future products manufacture.
3.5	BACKGROUND DATA	All primary product data was provided by British Gypsum, with transport to customer provided by Gyproc Norway. All secondary data was retrieved using Gabi LCA software using Ecoinvent 3.1(July 2014) and the Thinkstep Construction Products databases.
3.6	DATA QUALITY	Primary data was gathered from British Gypsum production figures for one site in the United Kingdom during the 2016 calendar year.
3.7	PERIOD UNDER REVIEW	The data is representative of the manufacturing processes of 2016.
3.8	ALLOCATIONS	All production data has been calculated on a mass basis.
3.9	COMPARABILITY	A comparison or an evaluation of EPD data is only possible where EN 15804 has been followed and the same building context and product-specific characteristics of performance are taken into account and the same stages have been included in the system boundary. According to EN 15804, EPD of construction products may not be comparable if they do not comply with this standard. According to ISO 21930, EPDs might not be comparable if they are from different programmes.

### 4. LCA: Scenarios and additional technical information

### Flow diagram of the Life Cycle



### Product stage, A1-A3

### Description of the stage:

The product stage of the specialist board products is subdivided into three modules: A1, A2 and A3 respectively "raw material supply", "transport" and "manufacturing".

### Description of scenarios and additional technical information:

### A1, raw material supply

This includes the extraction and processing of all raw materials and energy which occur upstream from the Gyproc Habito manufacturing process.

### A2, transport to the manufacturer

The raw materials are transported to the manufacturing site. The modelling includes road, boat, air and/or train transportations (average values) of each raw material.

### A3, manufacturing

This module includes the manufacture of products and the manufacture of packaging. The production of packaging material is taken into account at this stage. The processing of any waste arising from this stage is also included.

### **Description of the stage:**

The construction process stage is divided into two modules: A4, transport to the building site and A5, installation of Gyproc Habito in the building.

### A4, transport to the building site:

The table below quantifies the parameters for transporting Gyproc Habito from production gate to the building site.

PARAMETER	VALUE (expressed per functional/declared unit)
Fuel type and consumption of vehicle or vehicle type used for transport e.g. long distance truck, boat, etc.	34 - 40t gross weight / 27t payload capacity Diesel driven, Euro 0 - 5 mix, cargo, average sulfur content: EU = 10 ppm
Distance	600 km
Capacity utilisation (including empty returns)	100% volume capacity 83.6% empty returns
Bulk density of transported products	984 kg/m <sup>3</sup>
Volume capacity utilisation factor	1

### A5, installation in the building:

The table overleaf quantifies the parameters for installing Gyproc Habito at the building site. All installation materials and their waste processing are included.

PARAMETER	VALUE (expressed per functional/declared unit)
Ancillary materials for installation (specified by materials)	Jointing tape: 1.25 linear metres Joint filler: 0.33kg Joint cement: 0.165 kg Water: 0.041 litres. 8 Screws
Water use	0.00048 m <sup>3</sup>
Other resource use	None
Quantitative description of energy type (regional mix) and consumption during the installation process	0 energy use at installation
Wastage of materials on the building site before waste processing, generated by the product's installation (specified by type)	Gyproc Habito: 0.60 kg Pallet: 0.35 kg Jointing tape: 1.25 linear metres Joint filler: 0.33kg Joint cement: 0.165 kg Water: 0.041 litres. 8 Screws
Output materials (specified by type) as results of waste processing at the building site e.g. of collection for recycling, for energy recovering, disposal (specified by route)	Gyproc Habito: 0.12 kg to recycling Gyproc Habito: 0.48 kg to landfill Pallet: 0.35 kg to recycling Jointing tape: 0.0625 linear metres to landfill Joint filler: 0.33kg to landfill Joint cement: 0.00825 kg to landfill

### Description of the stage:

The use stage is divided into the following stages:

- B1, use or application of the installed product
  B2, maintenance
  B3, repair
  B4, replacement
  B5, refurbishment
  B6, operational energy use
- B7, operational water use

### Description of scenarios and additional technical information:

The product has a reference service life of 60 years. This assumes that the product will last in situ with no requirements for maintenance, repair, replacement or refurbishment throughout this period. Gyproc Habito is a passive building product; therefore it has no impact on this stage. The Reference Service Life (RSL) of the Gypsum product is assumed to be 60 years, as per the Saint-Gobain Methodological Guide, which created by Sonnelin, an external third party. It is an assumed value. This 60 year value is the amount of time that we recommend our products last for without refurbishment, and corresponds to standard building design life. As there are no impacts associated with the use stage (stage B), the RSL is not thought to have an impact on the environmental performance of the product.

### End-of-life stage C1-C4

### Description of the stage:

This includes the following stages:

- C1, de-construction, demolition
- C2, transport to waste processing
- C3, waste processing for reuse, recovery and/or recycling
- C4, disposal

### End-of-life:

PARAMETER	VALUE (expressed per functional/declared unit) / DESCRIPTION							
Collection process specified by type	<ul><li>2.40 kg collected separately and recycled</li><li>9.60 kg collected with mixed de-construction and demolition waste to landfill</li></ul>							
Recovery system specified by type	2.40 kg for recycling							
Disposal specified by type	9.60 kg to landfill							
Assumptions for scenario development (e.g. transportation)	<ul> <li>34 - 40t gross weight / 27t payload capacity</li> <li>Diesel driven, Euro 0 - 5 mix, cargo, average sulfur</li> <li>content: EU = 10 ppm</li> <li>32 km from construction/demolition site to waste</li> <li>handler</li> </ul>							

### Module D:

Modules and processes for the recycling of paper, steel, and Gypsum waste from Construction and Demolition sites is included in the modelling of this LCA.

# 5. LCA: Results per m<sup>2</sup> of Gyproc Habito

Description of the system boundary (X = Included in LCA, MNA = Module Not Assessed)

	ODU STAGI		CONSTRU		USE STAGE						E		IF LIF AGE	BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARY		
Raw material supply	Transport	Manufacturing	Transport	Construction-Installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-recovery
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	<b>B</b> 6	B7	C1	C2	C3	C4	D
Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х

		RESUL	TS OF TH	IE LCA -	ENVIRON	IMENTAL	. IMPACT	: per m <sup>2</sup> c	of Gyproc	Habito						
	Product stage	Constr proces	ruction s stage		Use stage								End-of-life stage			
Parameters	A1 / A2 / A3	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recovery, recycling	
👝 Global Warming Potential	2.86	0.0979	0.632	0	0	0	0	0	0	0	0	0.102	0.00981	0.165	-0.152	
(GWP) - kg CO₂ equiv/FU	The global warming potential of a gas refers to the total contribution to global warming resulting from the emission of one unit of that gas relative to one unit of the reference gas, carbon dioxide, which is assigned a value of 1.															
	1.58E-08	1.08E-13	7.98E-10	0	0	0	0	0	0	0	0.00E+00	1.13E-13	7.43E-14	1.63E-12	2.44E-11	
Ozone Depletion (ODP) kg CFC 11 equiv/FU	Destruction of the stratospheric ozone layer which shields the earth from ultraviolet radiation harmful to life. This destruction of ozone is caused by the breakdown of certain chlorine and/or bromine containing compounds (chlorofluorocarbons or halons), which break down when they reach the stratosphere and then catalytically destroy ozone molecules.															
Acidification potential (AP)	0.00916	0.000852	0.0021	0	0	0	0	0	0	0	0.00E+00	8.92E-04	2.15E-05	9.91E-04	0.000231	
kg SO₂ equiv/FU	Acid depositions have negative impacts on natural ecosystems and the man-made environment incl. buildings. The main sources for emissions of acidifying substances are agriculture and fossil fuel combustion used for electricity production, heating and transport.															
Eutrophication potential (EP) $kg (PO_4)^3 equiv/FU$	0.00171	1.23E-04	3.24E-04	0	0	0	0	0	0	0	0.00E+00	1.29E-04	2.16E-06	1.35E-04	6.43E-05	
			Exc	essive enric	hment of wa	ters and cor	ntinental sur	aces with n	utrients, and	the associa	ited adverse	biological e	ffects.			
Photochemical ozone creation (POPC)	0.000806	5.52E-05	2.34E-04	0	0	0	0	0	0	0	0.00E+00	-5.77E-05	1.59E-06	9.53E-05	4.98E-05	
kg Ethene equiv/FU			The reactior	n of nitrogen					the light end nlight to form		un. n example of	a photoche	mical reaction	on.		
Abiotic depletion potential for non-fossil resources (ADP- elements) - <i>kg Sb equiv/FU</i>	5.16E-05	2.99E-09	1.69E-05	0	0	0	0	0	0	0	0.00E+00	3.13E-09	3.83E-09	5.72E-08	1.08E-07	
Abiotic depletion potential for fossil resources (ADP-fossil	50.9	1.29	8.58	0	0	0	0	0	0	0	0	1.35	0.103	2.15	-0.0501	
resources) - MJ/FU				Consu	Imption of no	on-renewabl	e resources	thereby low	vering their a	availability fo	or future gene	erations.				

		RE	SULTS C	OF THE LO	CA - RES	OURCE L	ISE: per	m <sup>2</sup> of Gy	proc Hab	oito					
	Product stage	Constr proces		Use stage								End-of-I	ife stage		ery,
Parameters	A1/A2/A3	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Deconstructio n / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recovery, recycling
Use of renewable primary energy as energy carrier (PERE) - <i>MJ/FU</i>	22.2	0.0465	2.17	0	0	0	0	0	0	0	0	0.0487	0.1	0.253	5.51
Use of renewable primary energy resources as material utilisation (PERM) - <i>MJ/FU</i>	0	-		-	-	-	-	-	-	-	-	-	-	-	-
Total use of renewable primary energy resources (PERT) - <i>MJ/FU</i>	22.2	0.0465	2.17	0	0	0	0	0	0	0	0	0.0487	0.1	0.253	5.51
Use of non-renewable primary energy as energy carrier (PENRE) - <i>MJ/FU</i>	52.6	1.37	8.9	0	0	0	0	0	0	0	0	1.43	0.125	2.23	0.101
Use of non-renewable primary energy as material utilisation (PENRM) - <i>MJ/FU</i>	0	-			-										
Total use of non-renewable primary energy (PENRT) - <i>MJ/FU</i>	52.6	1.37	8.9	0	0	0	0	0	0	0	0	1.43	0.125	2.23	0.101
Use of secondary material (SM) - kg/FU	0.145	0	0.00747	0	0	0	0	0	0	0	0	0	0	0	0
Use of renewable secondary fuels (RSF) - <i>MJ/FU</i>	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0	0.00E+00	0
Use of non-renewable secondary fuels (NRSF) - <i>MJ/FU</i>	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0	0.00E+00	0
Use of net fresh water (FW) - m <sup>3</sup> /FU	0.0152	0.000133	0.00139	0	0	0	0	0	0	0	0.00E+00	1.39E-04	7.63E-05	4.54E-04	-0.000176

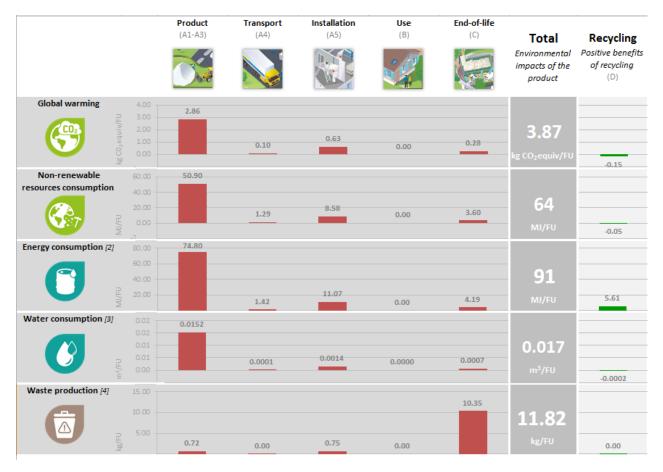
	RESULI	IS OF TH	E LCA – (		FLOWS A		TE CATE	GORIES:	per m <sup>2</sup>	of Gypro	c Habito				
	Product stage	Constr proces					Use stage			End-of-I	ife stage		ery,		
Parameters	A1 / A2 / A3	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Deconstructio n / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recovery, recycling
Hazardous waste disposed (HWD) - <i>kg/FU</i>	7.20E-07	4.12E-09	5.42E-08	0	0	0	0	0	0	0	0.00E+00	4.31E-09	2.06E-10	5.10E-08	1.85E-07
Non-hazardous(including inert) waste disposed (NHWD) - <i>kg/FU</i>	0.571	2.04E-04	0.526	0	0	0	0	0	0	0	0.00E+00	2.14E-04	0.000285	10.3	0.000334
Radioactive waste disposed (RWD) - <i>kg/FU</i>	0.000593	3.12E-05	1.24E-04	0	0	0	0	0	0	0	0.00E+00	3.27E-05	8.84E-06	3.08E-05	6.01E-05
Components for re-use (CRU) - kg/FU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Materials for recycling (MFR) - kg/FU	0	0	0.12	0	0	0	0	0	0	0	0	0	2.57	0	0
Materials for energy recovery (MER) - <i>kg/FU</i>	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	0
Exported energy (EEE& EET) -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

### 6. LCA results interpretation

The Product stage (A1-A3) is responsible for over 70% of Gyproc Habito's impacts in its lifetime for the following impacts: Global warming, Non-renewable resources consumption and Energy consumption. Water consumption is mainly shared between the Product stage (A1-A3) and the Installation stage (A5). Waste production is primarily attributed to the End-of-life stage. This is due to 80% of Gyproc Habito modelled as being landfilled at the end of its life, which is a conservative estimate.

2.86 kg of the total CO2 footprint comes from the Product stage of the life cycle. The main fuel used on British Gypsum sites is natural gas. It accounts for over 90% of energy usage.

British Gypsum send zero gypsum waste to landfill and encourages recycling waste. British Gypsum buy Category A Renewable Electricity with zero scope 2 Carbon Emissions.



### 7. Requisite evidence

### **VOC** emissions

None of the ingredients contained in Gyproc Habito contain VOC's which exceed the requirements of European voluntary labelling schemes connected to indoor air quality.

### 8. References

### PCR

The International EPD® System PCR 2012:01 version 2.1 for Construction Products and CPC 54 construction services.

### **Guiding principles**

General Programme Instruction for the International EPD System. 2.0 2013-06-04

Saint-Gobain Methodological Guide for LCA 2012.

#### Standards:

**BES 6001: Issue 3:2014** Framework Standard for Responsible Sourcing.

**BS:OHSAS 18001:2007** Occupational Health and Safety Management.

### EA 2012 Draft Report

An investigation into the disposal and recovery of gypsum waste. Environment Agency.

### EN 15804:2012-04

Sustainability of construction works – Environmental Product Declarations – Core rules for the product category of construction products.

**ISO 9001:2008** Quality management systems - Requirements.

**ISO 14001:2004** Environmental management systems – Requirements with guidance for use.

**ISO 14025:2011-10** Environmental labels and declarations – Type III environmental declarations – Principles and procedures.

### ISO 50001:2011

Energy management systems – Requirements with guidance for use.