DATE OF ISSUE: 30.11.2015
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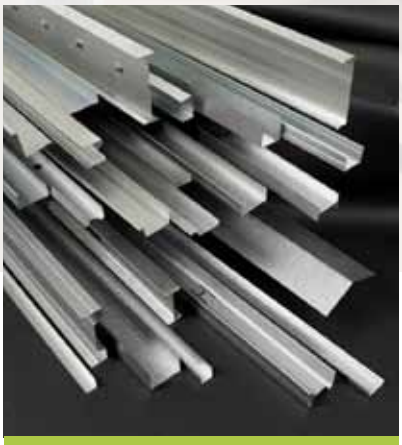
DECLARATION NUMBER:
S-P-00808

ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804 AND ISO 14025



Gypframe metal framing components for gypsum plasterboard

EPD VERIFIED

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.

HADLEY GROUP
Ultrasteel Products Limited

EPD®

British Gypsum
SAINT-GOBAIN

MANUFACTURER:
ULTRASTEEL PRODUCTS LTD

PROGRAMME USED:
THE INTERNATIONAL EPD® SYSTEM.
For more information see www.environdec.com

PCR IDENTIFICATION:
EN 15804 as the core PCR + The International EPD® System PCR 2012:01 version 2.0 for Construction Products and CPC 54 construction services. And with reference to Institut Bauen und Umwelt e.V. PCR Guidance-Texts for Building-Related Products and Services, Part B: Requirements on the EPD for Structural steels.

PRODUCT / PRODUCT FAMILY NAME AND MANUFACTURER REPRESENTED:
Gypframe metal framing components for gypsum plasterboard.

OWNER OF THE DECLARATION:
Saint-Gobain Construction Products UK Limited trading as British Gypsum, Saint-Gobain House, Binley Business Park, Coventry CV3 2TT

EPD PREPARED BY:
Rachel Morris, LCA Analyst, British Gypsum

SCOPE:
The LCA is based on 2014/2015 financial year production data for a site in the United Kingdom for Gypframe metal framing components for gypsum plasterboard for use in Great Britain. The production site is Smethwick, West Midlands. This EPD covers information modules A1 to C4 (cradle to gate with options) as defined in EN 15804:2012.

The declared unit is 1 tonne of Gypframe metal framing components for gypsum plasterboard.

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

- CEN standard EN 15804 serves as the core PCR (Product Category Rules)
- Independent verification of the declaration, according to EN ISO 14025:2010: External

  Internal ☐ External ☒
- Third party verifier*:
  Dr Andrew Norton, Renuables

* 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:

Gypframe metal framing components are light gauge steel profiles used in the construction of Gypsum plasterboard wall, ceiling and floor systems.

2.2 APPLICATION:

The modern, engineered alternative to traditional timber and blockwork construction, Gypframe-based wall, ceiling and floor systems are quicker and easier to install, whilst meeting the highest performance requirements. Up to 50% lighter than equivalent timber systems, and up to 70% lighter than blockwork, Gypframe metal products are easier to transport and offer a high strength to weight ratio for guaranteed performance and long life.

Gypframe components are easy to cut on site, non-flammable and won't rot, twist or warp. They can be stored outside and installed in any weather, making it easier to schedule work.

The application of the Ultra**STEEL**® process uniquely identifies the British Gypsum Gypframe product range. Along with the aesthetic difference, Ultra**STEEL**® provides the following additional benefits over plain steel sections:

- Improved yield strength
- Improved load carrying capacity
- Improved screw retention and strip out strength
- Improved resistance to screw pull-out

2.3 TECHNICAL DATA:

Gypframe profiles are manufactured using the patented Ultra**STEEL**® process and conform to EN 14195:2014.

Density	7750kg/m^3
Melting point	1370°C
Minimum tensile strength (for product)	270N/mm^2
Minimum elongation (for product)	22%
Tensile strength	270-500N/mm^2
Grade of material according to the delivery standards	DX51D + Z140 NAC non-fluting and free from coil break
Class of reaction to fire performance	A1

CERTIFICATIONS:

ISO 9001: 2008
Quality Management System

ISO 14001: 2004
Environmental Management System

BES 6001: ISSUE 3 2014
Framework Standard for Responsible Sourcing

2.4 PLACING ON THE MARKET/ APPLICATION RULES:

Gypframe conforms to EN 14195:2014 Metal framing components for gypsum board systems.

2.5 DELIVERY STATUS:

The EPD refers to a tonne of Gypframe.

2.6 BASE MATERIALS/ANCILLARY MATERIALS:

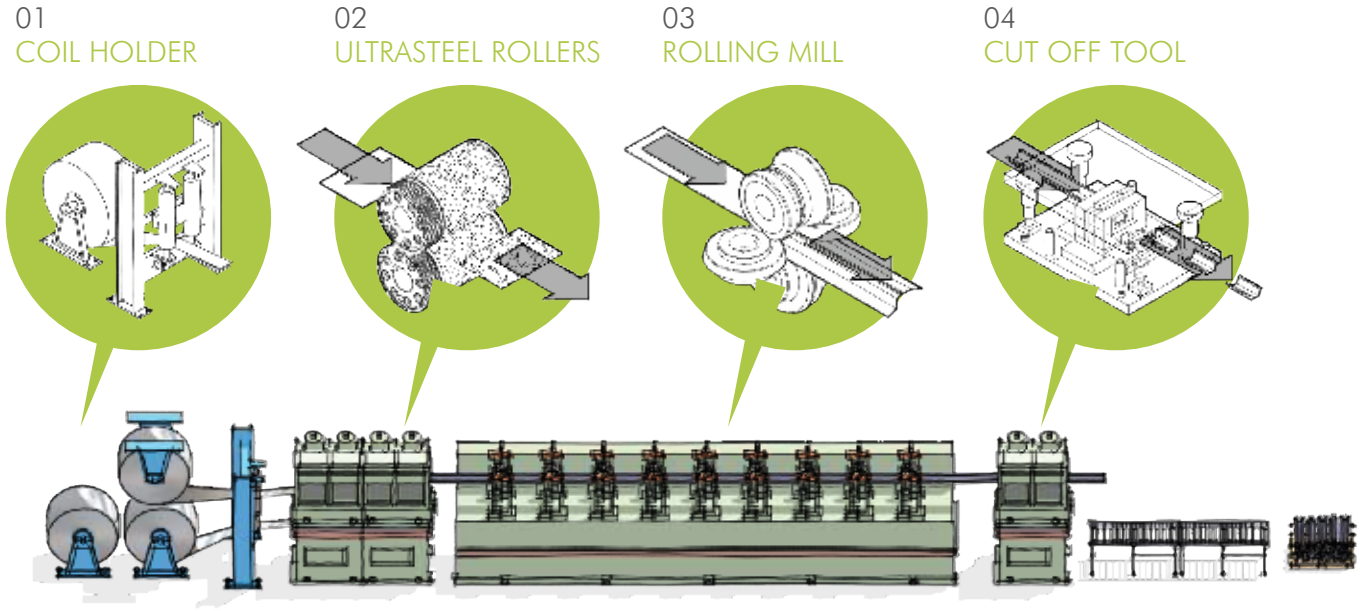
PARAMETER	PART
STEEL	97.7%
CARBON	0.18%
MANGANESE	1.2%
PHOSPHOROUS	0.12%
SILICON	0.5%
TITANIUM	0.3%
PACKAGING: STEEL BANDING	0.15kg per tonne Gypframe
PACKAGING: PLASTIC STRAPPING	0.59kg per tonne Gypframe
PACKAGING: WOODEN BEARER	10.43kg per tonne Gypframe

Gypframe metal framing components for gypsum plasterboard are composed of steel, carbon, manganese and phosphorous.

No additives are used, therefore there are no materials classed as substances of concern.

2.7 MANUFACTURE

Gypframe metal framing components for Gypsum plasterboard are manufactured using a cold roll form production process.



Roll forming is one of the most versatile and productive manufacturing methods ever devised for metal.

It is a continuous, high volume process involving passing flat strip in coil (01) through a series of contoured rolls, progressively forming the metal to achieve sections of virtually any profile (03). The process maintains a high degree of consistency and accuracy, producing to any desired length (04) from a wide range of materials.

One major technical breakthrough in the development of roll forming by Hadley is the Ultra**STEEL**® process (02) which can be applied to virtually any cold rolled formed section or product. Ultra**STEEL**® is an internationally patented method of altering the surface characteristics of roll formed steel in strip which, in addition to conferring an attractive finish, also provides equal strength from lighter gauge material, resulting in a more cost-effective end product.

One of the main advantages of the process is its simplicity. The Ultra**STEEL**® rolls can be easily added in-line (02) to an existing rolling machine. It is ideal for metal strip up to 8mm thick. The process can be applied to most metals.

2.8 ENVIRONMENT AND HEALTH DURING MANUFACTURE:

Hadley Group and Ultrasteel Products Limited strive to contribute to manufacturing in a low carbon world. From an environmental perspective, each of our products has been rigorously researched and developed to ensure it delivers optimum performance and considerable savings in raw material usage.

HEALTH

At Ultrasteel Products Limited, Health and Safety is a core value. The Company's aim is always to be injury-free. 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.

Ultrasteel Products Limited sites are managed through ISO 14001:2004 certified Environmental Management Systems.

2.9 PRODUCT PROCESSING/INSTALLATION:

Gypframe profiles are cold roll formed from DX51D + Z140 NA-C, utilising the Hadley Industries patented Ultra**STEEL**® process. Ultra**STEEL**® is a manufacturing process that alters the characteristics of plain steel, providing higher strength capacity at a lighter gauge. The process effectively strengthens the steel by applying a surface effect through the first stage rolling process, increasing the effective thickness.

Example: base gauge = 0.5mm:
after Ultra**STEEL**® process = 1.0mm

Once the Ultra**STEEL**® process has been applied, the base material is then passed through a series of contoured rollers which progressively form the steel into the required profile. The number of rollers in the process will vary, depending on the complexity of the profile being rolled. Service entries or tabs are pierced, either at the beginning or end of this process. The formed profiles are then cut to exact length, packed and then bundled ready for delivery. Installation of the metal profiles to form framing systems should be done according to guidelines set out within the British Gypsum literature and training guides. During the installation process, British Gypsum Wafer Head Drywall screws or Wafer Head Jack-Point screws should be used to connect two metal sections together.

Installation details can be found on the British Gypsum website at

www.british-gypsum.com/literature/site-book
www.british-gypsum.com/white-book-system-selector

2.10 PACKAGING:

Gypframe is supplied on returnable 100% recyclable wooden bearers. All wooden packaging is FSC certified.

2.11 CONDITION OF USE:

Gypframe metal components provide a system suitable for moderate impact. If the Gypframe components are correctly installed it should not require any form of maintenance.

2.12 ENVIRONMENT AND HEALTH DURING USE:

Gypframe is not classified as hazardous according to CLP.

2.13 REFERENCE SERVICE LIFE:

Gypframe is expected to last the service life of a building (60 years), as documented in The Green Guide to Specification.

2.14 EXTRAORDINARY EFFECTS:

FIRE

Gypframe metal framing components for gypsum plasterboards are designated A1 in accordance with Commission Decision 96/603/EC.

WATER

The galvanised coating offers protection to the metal from ingress of water or moisture.

MECHANICAL DESTRUCTION

Gypframe metal components are intended for commercial application and are stable products with no significant adverse environmental effects. The products should be installed according to British Gypsum installation guidelines.

2.15 RE-USE PHASE:

Gypframe metal framing components for gypsum plasterboard can be recycled.

2.16 DISPOSAL:

Waste from Gypframe metal framing components is fully recyclable. The European waste catalog code is 12 01 01.

2.17 FURTHER INFORMATION:

British Gypsum,
East Leake,
Loughborough, Leicestershire
LE12 6HX

0115 945 1000

- www.british-gypsum.com
- www.hadleygroup.com/ultrasteel/30-years-in-the-making.aspx

3 LCA CALCULATION RULES

3.1	FUNCTIONAL UNIT / DECLARED UNIT	The declared unit is 1 tonne of Gypframe profile for gypsum plasterboard. The gauge of the profile varies between 0.4 - 1mm. The density of the Gypframe profile is 7750kg/m^3. The Gypframe profiles Dimensional specifications datasheet can be referenced to calculate the weight of a linear metre of each type of profile. This can then be applied to calculate assumed environmental impacts for that profile from the LCA results
3.2	SYSTEM BOUNDARIES	Cradle to Gate with Options: Mandatory stages = A1-3; Optional stages = A4-5, B1-7, C1-4.
3.3	ESTIMATES AND ASSUMPTIONS	Primary data was gathered from one 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. The end of life and installation waste handling is taken from the World Steel Association's 'Sustainable Steel At the core of a green economy' publication. All raw materials have been calculated as a total weight of each used in the manufacture of the specific products at each site using the purchasing system. A weighted average for their transportation has been calculated for each to create an Ultrasteel figure. All energy, water and waste are proportioned at the manufacturing site according to the kg of the specific product's manufacture relative to the total site product manufacture between 1 April 2014 – 31 March 2015. Transport of the final material to British Gypsum manufacturing sites has been taken from Ultrasteel's purchasing system. The transport of the final material from British Gypsum to customer has been taken from British Gypsum's purchasing system.
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 Ultrasteel Products Ltd and British Gypsum. All secondary data was retrieved using TEAM software using Ecoinvent 2.2 (2010) and DEAM (2006) databases.
3.6	DATA QUALITY	Primary data was gathered from Ultrasteel production figures for the site in Smethwick and British Gypsum transportation figures during the 2014/2015 financial year. A 2011 fuel mix for electricity usage in the UK was assumed for all Ultrasteel Products Ltd production sites.

3.6	DATA QUALITY	Primary data was gathered from Ultrasteel production figures for the site in Smethwick and British Gypsum transportation figures during the 2014/2015 financial year. A 2011 fuel mix for electricity usage in the UK was assumed for all Ultrasteel Products Ltd production sites.
3.7	PERIOD UNDER REVIEW	The data is representative of the manufacturing processes of 2014/2015.
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.

C3 WASTE PROCESSING FOR REUSE, RECOVERY AND/OR RECYCLING

C4 DISPOSAL

A1 RAW MATERIALS

Includes the extraction and processing of all raw materials and energy which occur upstream from the Gypframe manufacturing process.

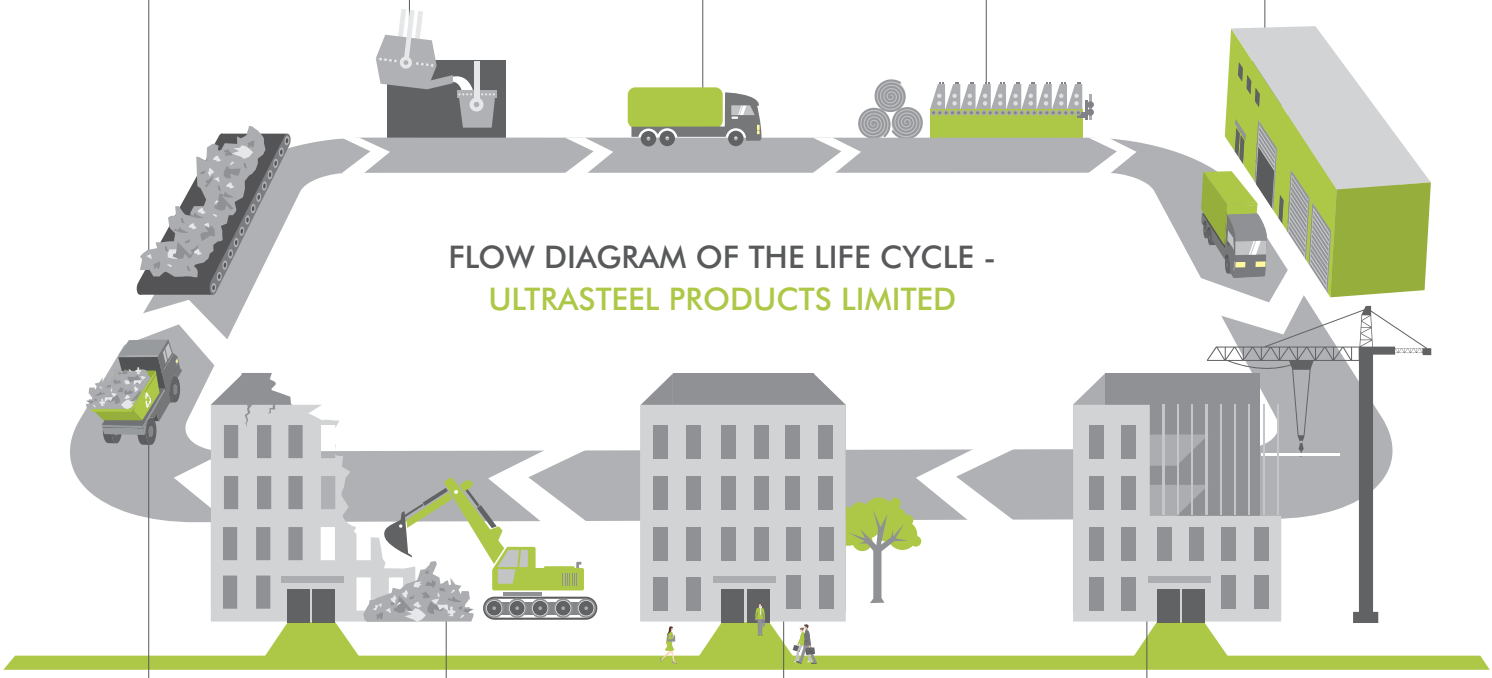
A2 TRANSPORT TO THE MANUFACTURER

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

A3 MANUFACTURING

Includes the manufacture of products and 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.

A4 TRANSPORT TO THE BUILDING SITE



FLOW DIAGRAM OF THE LIFE CYCLE - ULTRASTEEL PRODUCTS LIMITED

C2 TRANSPORT TO WASTE PROCESSING

C1 DECONSTRUCTION / DEMOLITION

B1 USE OR APPLICATION OF THE INSTALLED PRODUCT

B2 MAINTENANCE

B3 REPAIR

B4 REPLACEMENT

B5 REFURBISHMENT

B6 OPERATIONAL ENERGY USE

B7 OPERATIONAL WATER USE

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. Gypframe is a passive building product; therefore it has no impact on this stage.

A5 INSTALLATION IN THE BUILDING

CONSTRUCTION PROCESS STAGE: A4-A5

A4: transport to the building site:
The table below quantifies the parameters for transporting 1 tonne Gypframe from production gate to the building site. The distance quoted is a weighted average for transport of Gypframe in Great Britain in the 2014/2015 financial year, from the production site to building sites, calculated using postcodes of our customers and quantity of product transported to each.

PARAMETERS	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.	44 tonne articulated large goods vehicle (including average payload of 24.8 tonnes) Diesel consumption 34.6litres per 100km travelled
Distance	148km
Capacity utilisation (including empty returns)	100% volume capacity, 99.8% empty returns
Bulk density of transported products	7750kg/m^3
Volume capacity utilisation factor	1

A5: installation in the building:
The table below quantifies the parameters for installing 1 tonne Gypframe at the building site.
All installation materials and their waste processing are included. Figures quoted in the table are based on the World Steel Association's 'Sustainable Steel At the core of a green economy' publication. This states that 100% of construction waste and 85% of demolition waste is recycled. The remaining 15% of demolition waste sent to landfill.

PARAMETERS	VALUE (expressed per functional/declared unit)
Ancillary materials for installation (specified by materials)	None
Water use	0m^3
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)	Gypframe: 0.1 tonne Plastic strapping: 0.59kg Screws: 0kg Metal Banding: 0.15 Wooden Bearers: 10.43kg
Output materials (specified by type) as results of waste processing at the building site e.g. of collection for recycling, for energy recovering, by route)	Gypframe: 0.1 kg to recycling Plastic Strapping: 0.59kg to landfill Screws: 0kg Metal Banding: 0.15kg to recycling Wooden Bearers: 10.43kg to recycling

END-OF-LIFE STAGE C1-C4

DESCRIPTION OF SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION:

The end of life scenarios have been taken from the Environment Agency's 'An investigation into the disposal and recovery of gypsum waste' draft report.

PARAMETERS	VALUE (expressed per functional/declared unit) /DESCRIPTION
Collection process specified by type	0.85 tonnes collected separately and down-cycled 0.15 tonnes collected with mixed de-construction and demolition waste to landfill
Recovery system specified by type	0.85 tonnes for recycling
Disposal specified by type	0.15 tonnes to landfill
Assumptions for scenario development (e.g. transportation)	44 tonne articulated large goods vehicle (including payload of 26 tonnes) Diesel consumption 38 litres per 100 km travelled 32 km from construction/demolition site to waste handler

DESCRIPTION OF THE SYSTEM BOUNDARY

Product stage (Aggregated)			Construction process stage		Use stage							End-of-life stage				Benefits & loads beyond the system boundary
Raw materials	Transport	Manufacturing	Transport	Construction installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse recovery
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	MNA

(X = Included in LCA, MNA = Module Not Assessed)

5 LCA: RESULTS - ENVIRONMENTAL IMPACT: PER TONNE GYPFRAME

	Product stage (Aggregated)	Construction process stage		Use stage							End-of-life stage				
	A1 Raw material A2 Transport A3 Manufacturing	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 (GWP) kg CO_2 equiv/FU	1.7E+03	2.6E+01	1.8E+02	0	0	0	0	0	0	0	0	2.4E+00	0	2.1E+00	MNA
	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.														
Ozone depletion (ODP) kg CFC 11 equiv/FU	7.6E-06	1.8E-05	2.8E-06	0	0	0	0	0	0	0	0	1.7E-06	0	1.8E-06	MNA
	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) kg SO_2 equiv/FU	6.4E+00	1.6E-01	6.6E-01	0	0	0	0	0	0	0	0	1.5E-02	0	1.8E-02	MNA
	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	3.6E-01	3.9E-02	4.1E-02	0	0	0		0	0	0	0	3.6E-03	0	3.8E-03	MNA
	Excessive enrichment of waters and continental surfaces with nutrients, and the associated adverse biological effects,														
Photochemical ozone creation (POCP) kg Ethene equiv/FU	8.1E-01	1.2E-02	8.3E-02	0	0	0	0	0	0	0	0	1.1E-03	0	1.3E-03	MNA
	Chemical reactions brought about by the light energy of the sun, The reaction of nitrogen oxides with hydrocarbons in the presence of sunlight to form ozone is an example of a photochemical reaction,														
Abiotic depletion potential for non-fossil resources (ADP-elements) kg Sb equiv/FU	2.3E-05	2.0E-08	2.3E-06	0	0	0	0	0	0	0	0	1.8E-09	0	9.1E-10	MNA
Abiotic depletion potential for fossil resources (ADP-fossil fuels) MJ/FU	2.0E+04	3.3E+02	2.0E+03	0	0	0	0	0	0	0	0	3.0E+01	0	2.8E+01	MNA
	Consumption of non-renewable resources, thereby lowering their availability for future generations,														

5 LCA: RESULTS - RESOURCE USE: PER TONNE GYPFRAME

	Product stage (Aggregated)	Construction process stage		Use stage							End-of-life stage				
	A1 Raw material A2 Transport A3 Manufacturing	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
Use of renewable primary energy excluding renewable primary energy resources used as raw materials - MJ / FU	2.9E+02	1.1E-01	3.0E+01	0	0	0	0	0	0	0	0	9.6E-03	0	5.2E-02	MNA
Use of renewable primary energy used as raw materials - MJ / FU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials) - MJ / FU	2.9E+02	1.1E-01	3.0E+01	0	0	0	0	0	0	0	0	9.6E-03	0	5.2E-02	MNA
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials - MJ /FU	2.0E+04	3.3E+02	2.1E+03	0	0	0	0	0	0	0	0	3.0E+01	0	2.7E+01	MNA
Use of non-renewable primary energy used as raw materials - MJ / FU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials) - MJ / FU	2.0E+04	3.3E+02	2.1E+03	0	0	0	0	0	0	0	0	3.0E+01	0	2.7E+01	MNA
Use of secondary material Kg / FU	6.9E-01	0	8.2E-1	0	0	0	0	0	0	0	0	0	0	0	MNA
Use of non-renewable secondary fuels - MJ / FU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Use of non-renewable secondary fuels - MJ / FU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Use of net fresh water m^3/FU	5.9E+00	3.1E-02	6.0E-01	0	0	0	0	0	0	0	0	2.9E-03	0	0	MNA

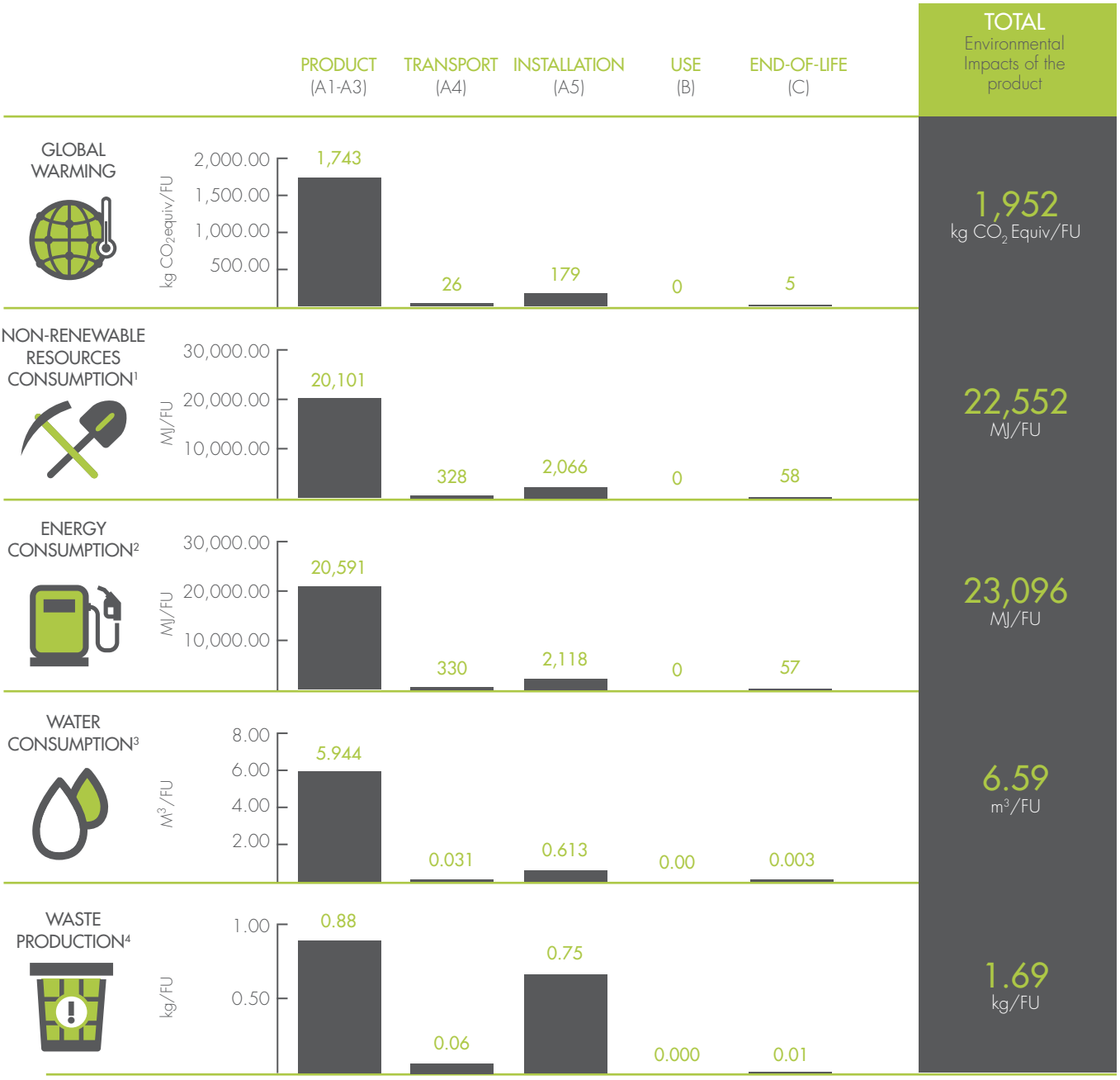
5 LCA: RESULTS - OUTPUT FLOWS AND WASTE CATEGORIES: PER TONNE GYPFRAME

	Product stage (Aggregated)	Construction process stage		Use stage							End-of-life stage				
	A1 Raw material A2 Transport A3 Manufacturing	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
Components for re-use kg / UF	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Materials for recycling kg /UF	2.5E+01	2.2E-04	1.2E+02	0	0	0	0	0	0	0	0	2.0E-05	0	0	MNA
Materials for energy recovery - kg /UF	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Exported energy MJ / UF	4.1E-06	2.9E-07	4.4E-07	0	0	0	0	0	0	0	0	2.6E-08	0	0	MNA
Hazardous waste disposed kg / FU	1.5E-01	7.4E-03	1.6E-02	0	0	0	0	0	0	0	0	6.7E-04	0	0	MNA
Non-hazardous waste disposed - kg / FU	7.3E-01	4.5E-02	7.3E-01	0	0	0	0	0	0	0	0	4.1E03	0	0	MNA
Radioactive waste disposed - kg /UF	2.3E-03	5.3E-03	8.0E-04	0	0	0	0	0	0	0	0	4.8E-04	0	0	MNA

RESULTS INTERPRETATION

The Product stage (A1-A3) is responsible for over 89% of Gypframe in its lifetime for the following impacts: Global warming, Non-renewable resources consumption, Energy consumption and Water consumption. Waste production is primarily attributed to the Product stage. This is due to some of the packaging materials being landfilled at this stage.

1743MJ of the total primary energy comes from the Product stage of the life cycle. The main fuel used on Ultrasteel Products Ltd production sites is electricity. It accounts for over 65% of energy usage. Ultrasteel Products Ltd send zero waste to landfill and encourages recycling waste.



1 This indicator corresponds to the abiotic depletion potential of fossil resources
2 This indicator corresponds to the total use of primary energy
3 This indicator corresponds to the use of net fresh water
4 This indicator corresponds to the sum of hazardous, non-hazardous and radioactive waste disposed

REQUISITE EVIDENCE

Gypframe is used internally in a building. Should Gypframe be exposed to external surroundings, no corrosion should occur as galvanised steel is inherently non-corrosive.

8 REFERENCES

GENERAL PRINCIPLES

The International EPD® System PCR 2012:01 version 2.0 for Construction Products and CPC 54 construction services.

PCR

Institut Bauen und Umwelt e.V., Königswinter (pub.): Product Category Rules for Building-Related Products and Services 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, 1.3, June 2014.

Institut Bauen und Umwelt e.V., Königswinter (pub.): Product Category Rules for Building-Related Products and Services from the range of Environmental Product Declarations of Institut Bauen und Umwelt (IBU), Part B: Requirements on the EPD for Structural steel version 1.6.

STANDARDS:

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

EN 10346:2009
Continuously hot-dip coated steel flat products - Technical delivery conditions

EN 1495:2014
Metal framing components for gypsum board systems.

EN 15804:2012- + A1:2013
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.

OTHER REFERENCES

Green Guide to Specification
The Green Guide Explained. BRE.

Gypframe profiles
Dimensional specifications data sheet. British Gypsum

World Steel Association publication
Sustainable Steel
At the core of a green economy. World Steel Association.