

Statement of Verification

BREG EN EPD No.: 000368

Issue 02

This is to verify that the
Environmental Product Declaration
provided by:
W.E. Rawson Ltd



is in accordance with the requirements of:
EN 15804:2012+A1:2013

and

BRE Global Scheme Document SD207

This declaration is for:
Rawson Carpet Solutions Standard Fibre Bonded Carpet Range

Company Address

Castle Bank Mills
Portobello Road
Wakefield
WF1 5PS



Signed for BRE Global Ltd

Emma Baker
Operator

05 October 2023
Date of this Issue

18 November 2021
Date of First Issue

17 November 2026
Expiry Date



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Information modules covered

Product			Construction		Use stage							End-of-life				Benefits and loads beyond the system boundary
					Related to the building fabric				Related to the building							
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Raw materials supply	Transport	Manufacturing	Transport to site	Construction – Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse, Recovery and/or Recycling potential
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Note: Ticks indicate the Information Modules declared.

Manufacturing site

W.E. Rawson Ltd
 Castle Bank Mills, Portobello Road,
 Wakefield
 WF1 5PS

Construction Product

Product Description

This LCA covers Rawsons Fibre bonded carpet tile and sheet range. The dense needle punched ranges are available in an assortment of styles and colours. The carpets are durable, low maintenance, comfortable, and provide thermal properties and acoustic reduction.

The LCA covers the following products in the range and results for all inputs are averaged by 1m2 coverage

- Eurocord
- Freeway
- Felkirk
- Champion
- Dash
- Laserlight
- Neon
- Arrival
- Trackmaster

Technical Information

Product	Weight	Thickness	Dimensions of tile/roll
Eurocord Sheet	1150g/m ²	5.8mm	2 x 30m
Eurocord Tile	4150g/m ²	6.7mm	50 x 50cm
Freeway Sheet	1100g/m ²	6mm	2 x 30m
Freeway Tile	4100g/m ²	7mm	50 x 50cm
Felkirk Sheet	1300g/m ²	9mm	2 x 30m
Felkirk Tile	4300g/m ²	9.5mm	50 x 50cm
Champion Sheet	1100g/m ²	6.6mm	2 x 12.5m
<u>Champion Tile</u>	4100g/m ²	8mm	50 x 50cm
Dash Tile	4075g/m ²	9.7mm	50 x 50mm
Laserlight Tile	4160g/m ²	9.7mm	50 x 50cm
Neon Tile	4110g/m ²	9.7mm	50 x 50cm
Arrival Tile	4080g/m ²	8mm	50 x 50cm
Trackmaster Sheet	2400g/m ²	11mm	2 x 12.5m

For further details see technical sheets on www.rawsoncarpetsolutions.co.uk

Main Product Contents

Material/Chemical Input	%
Polypropylene Fibre	43%
Limestone Backing	25%
Latex Coating	13%
Polyester Fibre	11%
Bitumen Backing	8%

Average material composition of all products assessed within this average EPD

Manufacturing Process

For Single Layer:

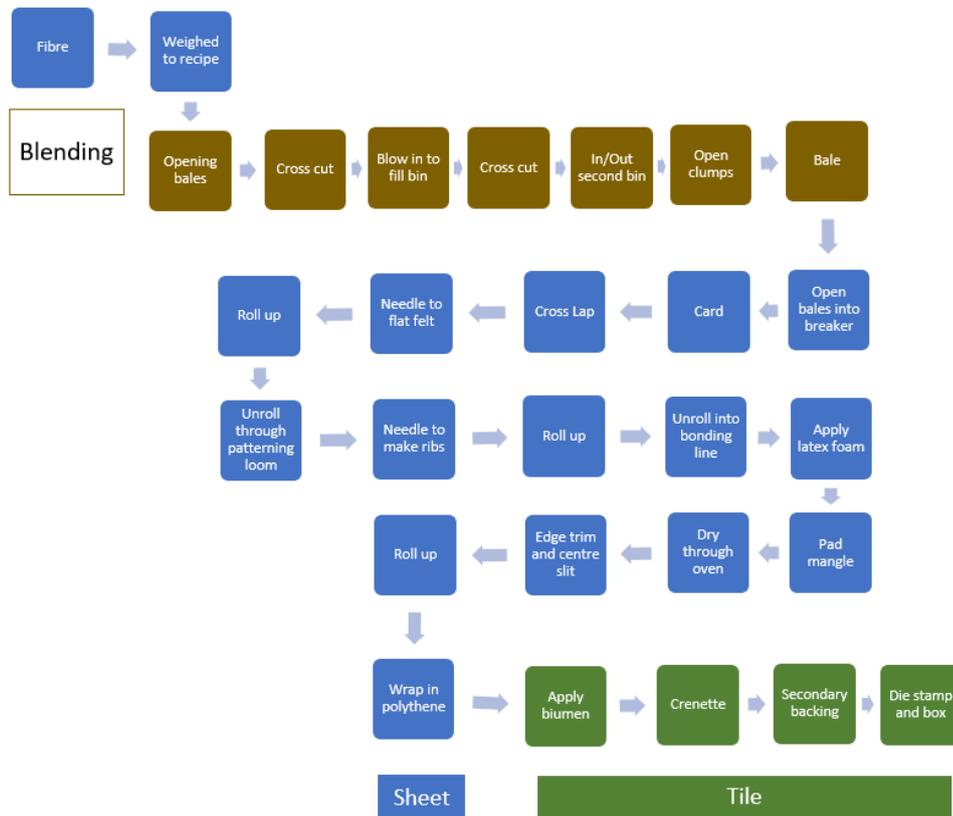
1) On Rawson Site:

- a. Surface: the site buys lose staple fibre (polyester) on one hand and a staple fibre material (polypropylene) on the other,
- b. Bonding: both the polyester and the polypropylene are blended
- c. the sheet is needle punched to a felt,
- d. then a pattern is created using a further needle punch operation,
- f. Base: foamed latex is applied and padded into back of the product,
- g. the resulting surface and base sheet is bonded in a drying oven into a laminate,
- i. Packaging:
 - i. If a tile, goes at subcontractor to cut into slabs and die stamp to tiles
 - ii. If a sheet, it is rolled on a cardboard core or roll as tile topping,
 - j. then boxed, then wrapped,
 - l. units are then packed on wooden pallets to be kept stocked for despatch to clients,
 - m. Packs on pallets are protected with polyethylene film. Pallets can be reused or recycled from the installation site.

2) On Stile Backing Site:

The sheet is sent to backing subcontractor (bitumen and limestone), then cut into tiles, then boxed, then marked, then wrapped, units are then packed on wooden pallets for dispatch, protected by polyethylene film. This packaging can be reused or recycled from the installation site, then stocked on pallets.

Process flow diagram



Life Cycle Assessment Calculation Rules

Declared unit description

1 m² of carpet with average weight of 1.755 kg/m².

System boundary

This is a cradle to gate EPD, reporting all production life cycle stages of modules from A1 to A3 inclusive in accordance with EN 15804:2012+A1:2013.

Data sources, quality and allocation

Data collected by Rawson for the production of Rawson carpets at the Wakefield site for the period 1st January 2019 to 31st December 2019 has been used for this EPD.

The Wakefield site produces other products. Site wide values for energy, water and wastewater have been allocated on a mass basis.

Figures for the raw materials, ancillary materials and packaging were from actual usages. Allocation of energy, water, and waste has been done according to the provisions of the BRE PCR PN514 and EN 15804. Secondary data have been drawn from the BRE LINA database v2.0.79 and the background LCI datasets are based on ecoinvent v3.2 (2015).

Quality Level	Geographical representativeness	Technical representativeness	Time representativeness
Very Good	Data from area under study	Data from processes and products under study. Same state of technology applied as defined in goal and scope (i.e. identical technology)	n/a
Fair	n/a	n/a	Less than 10 years of difference between the reference year according to the documentation, and the time period for which data are representative

Cut-off criteria

All inputs or outputs have been included and all raw materials, packaging and transport, energy, water use and wastes, are included, except for direct emissions to air, water and soil, which are not measured. Upstream extraction and/or processing of inputs are included within the use of the background datasets within LINA.

LCA Results

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts			GWP	ODP	AP	EP	POCP	ADPE	ADPF
			kg CO ₂ equiv.	kg CFC 11 equiv.	kg SO ₂ equiv.	kg (PO ₄) ³⁻ equiv.	kg C ₂ H ₄ equiv.	kg Sb equiv.	MJ, net calorific value.
Product stage	Raw material supply	A1	2.87E+00	7.87E-08	1.18E-02	2.14E-03	5.35E-03	7.24E-06	9.05E+01
	Transport	A2	3.04E-01	5.41E-08	2.63E-03	5.81E-04	2.37E-04	6.18E-07	4.53E+00
	Manufacturing	A3	4.79E+00	3.79E-07	2.45E-02	5.83E-03	1.79E-03	9.50E-06	8.11E+01
	Total (of product stage)	A1-3	7.96E+00	5.12E-07	3.89E-02	8.55E-03	7.38E-03	1.74E-05	1.76E+02

GWP = Global Warming Potential;
 ODP = Ozone Depletion Potential;
 AP = Acidification Potential for Soil and Water;
 EP = Eutrophication Potential;

POCP = Formation potential of tropospheric Ozone;
 ADPE = Abiotic Depletion Potential – Elements;
 ADPF = Abiotic Depletion Potential – Fossil Fuels;

Parameters describing resource use, primary energy			PERE	PERM	PERT	PENRE	PENRM	PENRT
			MJ	MJ	MJ	MJ	MJ	MJ
Product stage	Raw material supply	A1	1.14E+00	7.90E-05	1.14E+00	agg	agg	agg
	Transport	A2	7.55E-02	1.99E-07	7.55E-02	agg	agg	agg
	Manufacturing	A3	9.53E+00	3.55E-05	9.53E+00	agg	agg	agg
	Total (of product stage)	A1-3	1.07E+01	1.15E-04	1.07E+01	1.52E+02	4.61E+01	1.98E+02

PERE = Use of renewable primary energy excluding renewable primary energy used as raw materials;
 PERM = Use of renewable primary energy resources used as raw materials;
 PERT = Total use of renewable primary energy resources;

PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials;
 PENRM = Use of non-renewable primary energy resources used as raw materials;
 PENRT = Total use of non-renewable primary energy resource

LCA Results (continued)

Parameters describing resource use, secondary materials and fuels, use of water						
			SM	RSF	NRSF	FW
			kg	MJ net calorific value	MJ net calorific value	m ³
Product stage	Raw material supply	A1	4.35E-01	0.00E+00	0.00E+00	4.99E-02
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	1.03E-03
	Manufacturing	A3	0.00E+00	0.00E+00	0.00E+00	2.75E-02
	Total (of product stage)	A1-3	4.35E-01	0.00E+00	0.00E+00	7.84E-02

SM = Use of secondary material;
RSF = Use of renewable secondary fuels;

NRSF = Use of non-renewable secondary fuels;
FW = Net use of fresh water

Other environmental information describing waste categories						
			HWD	NHWD	RWD	
			kg	kg	kg	
Product stage	Raw material supply	A1	3.41E-02	7.34E-02	5.45E-05	
	Transport	A2	1.98E-03	1.59E-01	3.11E-05	
	Manufacturing	A3	1.98E-02	1.33E-01	4.84E-04	
	Total (of product stage)	A1-3	5.59E-02	3.65E-01	5.70E-04	

HWD = Hazardous waste disposed;
NHWD = Non-hazardous waste disposed;
RWD = Radioactive waste disposed

LCA Results (continued)

Other environmental information describing output flows – at end of life						
			CRU	MFR	MER	EE
			kg	kg	kg	MJ per energy carrier
Product stage	Raw material supply	A1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Manufacturing	A3	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Total (of product stage)	A1-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CRU = Components for reuse;
MFR = Materials for recycling

MER = Materials for energy recovery;
EE = Exported Energy

Interpretation

As this is an average EPD it should be noted that there could be variation in impacts between best and worse case products included in the range. Of particular note is the tile products with additional bitumen impacts that would increase the results. Eurocord, Freeway, Felkirk and Champion have similar composition and likely to yield similar results. Dash, Laserlight and arrival have proportionally more backing and likely to yield different results if assessed individually.

References

BSI. Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products. BS EN 15804:2012+A1:2013. London, BSI, 2013.

BSI. Environmental labels and declarations – Type III Environmental declarations – Principles and procedures. BS EN ISO 14025:2010 (exactly identical to ISO 14025:2006). London, BSI, 2010.

BSI. Environmental management – Life cycle assessment – Principles and framework. BS EN ISO 14040:2006. London, BSI, 2006.

BSI. Environmental management – Life cycle assessment – requirements and guidelines. BS EN ISO 14044:2006. London, BSI, 2006.