

# OAKKEY

MADE FOR PROFESSIONALS SINCE 1833

## ENVIRONMENTAL PRODUCT DECLARATION

OF MULTIPLE PRODUCTS, BASED ON A  
REPRESENTATIVE PRODUCT

IN ACCORDANCE WITH ISO 14025:2006 AND  
EN 15804:2012+A2:2019/AC:2021



## OAKKEY® Liberty Green Coated Abrasives

Version: 1.0. Version date : 2026/04/01

Validity date : 2031/03/31

 **EPD**

INTERNATIONAL EPD SYSTEM

The International EPD® System

Programme operator: EPD international AB

Registration number:

**EPD-IES-0027568**



**EPD Owner: Saint-Gobain Surface Solutions**

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at [www.environdec.com](http://www.environdec.com)



Another great  sanding product

SAINT-GOBAIN

Article codes covered:

Rolls : 66261116692, 66261116688, 66261116687,  
66261116752, 66261116751, 66261116749


Sheets : 66261136427, 66261116761

This EPD® is only valid for the new generation of products, which is clearly identifiable through the recycled content claim displayed on each product. Products with similar article codes but without a recycled content claim on them are not covered by this EPD®.

  
SAINT-GOBAIN

# General information

## Information on programme, PCR, and verification

<b>EPD® programme operator</b>	<b>The International EPD® System</b>  EPD International AB Box 210 60 - SE-100 31 Stockholm - Sweden  www.environdec.com support@environdec.com
<b>CEN standard EN 15804:2012+A2:2019/AC:2021 serves as the Core Product Category Rules (PCR)</b>	
<b>Product Category Rules (PCR)</b>	<b>PCR 2019:14 Construction products, version 2.0.1</b> <b>c-PCR-030 Abrasive Products, version 2024-06-20</b>
<b>PCR review was conducted by</b>	The Technical Committee of the International EPD® System. See www.environdec.com for a list of members.  Chairs of the PCR review: Rob Rouwette (chair), Noa Meron (co-chair).
<b>Verification</b>	External and independent ('third-party') verification of the declaration and data, according to ISO 14025:2006, via EPD verification through: <input checked="" type="checkbox"/> Individual EPD verification without a pre-verified LCA/EPD tool <input type="checkbox"/> Individual EPD verification with a pre-verified LCA/EPD tool <input type="checkbox"/> EPD process certification without a pre-verified LCA/EPD tool <input type="checkbox"/> EPD process certification with a pre-verified LCA/EPD tool <input type="checkbox"/> Fully pre-verified EPD tool  Third-party verifier : Viktor HAKKARAINEN – CHM Analytics Approved by: The International EPD® System
<b>Third party verifier details</b>	<b>Viktor HAKKARAINEN – CHM Analytics</b> Drottninggatan 69, 411 07 Gothenburg, Sweden viktor.hakkarainen@chm-analytics.com 
<b>Procedure for follow-up of data during EPD validity involves third party verifier</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>EPD® registration number</b>	<b>EPD-IES-0027568</b>
<b>EPD® prepared by</b>	Maud ENEE – Saint-Gobain Surface Solutions maud.enee@saint-gobain.com

## Ownership and limitations on use of EPD

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but published in different EPD programmes, may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same first-digit version number) or be based on fully aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have identical scope in terms of included life-cycle stages (unless the excluded life-cycle stage is demonstrated to be insignificant); apply identical impact assessment methods (including the same version of characterization factors); and be valid at the time of comparison.

## Information about EPD owner

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<b>Address and contact information of the EPD® owner</b>	<b>Saint-Gobain Surface Solutions</b> Rue de l'Ambassadeur – 78700 Conflans-Sainte-Honorine – France
<b>Description of the organisation</b>	Saint-Gobain Surface Solutions designs, develops, manufactures and sells a wide range of abrasives solutions, including coated abrasives, used in several industries and for various applications.
<b>Plant certifications and labels</b>	ISO 14001 ISO 9001 SEAM
<b>EPD® prepared by</b>	Maud ENEE maud.enee@saint-gobain.com

The intended use of this EPD is B2B communication.

# Product information

<b>Product name</b>	<b>OAKEY® Liberty Green</b>
<b>Reference product for the EPD®</b>	<b>OAKEY® Liberty Green G156 grit 120, 115mm x 10m roll</b>
<b>UN CPC code</b>	<b>3791</b> - Millstones, grindstones, grinding wheels and the like, without frameworks, for working stones, and parts thereof, of natural stone, of agglomerated natural or artificial abrasives, or of ceramics; natural or artificial abrasive powder or grain, on a base of textile, paper or other material
<b>Product description and key functionalities</b>	Liberty Green is a premium coated abrasive range. Constructed from premium grade aluminium oxide and a heavy E-weight backing, Liberty Green is self-sharpening, anti-clogging and extremely durable. Liberty Green G156 is sold in sheets and rolls of different dimensions to answer to all application needs.
<b>Potential product uses</b>	Manual sanding of wood, metal, stone, plaster and other materials; surface conditioning applications. Perfect for everyday decorating (DIY) or even for heavy duty applications (professional) including construction industry operations
<b>Manufacturing Site</b>	Abrasive product made in Conflans, France



Pictures of Liberty Green G156 products covered in this EPD

## Multiple products included in the EPD

This EPD covers multiple products (in different grit sizes) of the **Liberty Green G156** range. **The reference product of this EPD is G156 in grit 120 (115mm x 10m roll)**. The choice of this article as the reference product is based on sales volumes.

The following table shows which products are included in this EPD:

Grit Size →	60	80	120
Shapes and packaging ↓			
Roll 115mm x 5m with cardboard sleeve	Yes 66261116692	Yes 66261116688	Yes 66261116687
Roll 115mm x 10m with cardboard sleeve	Yes 66261116752	Yes 66261116751	<b>Reference product 66261116749</b>
Sheet 230mm x 280mm 3x pack in cardboard sleeve	Yes 66261136427	Yes 66261136427	Yes 66261136427
Sheet 230mm x 280mm 10x pack in cardboard sleeve	Yes 66261116761	Yes 66261116761	Yes 66261116761

Conversion factors are provided in the “additional environmental information” section to convert results of the reference product into results of another of the included products.

Dimensions included in the EPD are, for all grit sizes: 115mm x 5m roll, 115mm x 10m roll and 230mm x 280mm sheet.

## Content declaration

Description of the main components for 1 m<sup>2</sup> of **G156 120 as 115mm x 10m roll** is given in this chapter.

Recycled content of product and packaging is given for both for post-consumer stream (compulsory according to PCR) as well as from pre-consumer stream (optional).

Product components	Weight, declared product [kg / m <sup>2</sup> ]	Range of weight for other included products [kg / m <sup>2</sup> ]
Paper backing	0,19	0,19
Resins and grain mix	0,28	0,28 - 0,47
<b>Sum</b>	<b>0,46</b>	<b>0,46 – 0,65</b>
Packaging material (cardboard)	0,013	0,013 – 0,31
<b>Total with Packaging</b>	<b>0,47</b>	<b>0,47 – 0,96</b>

Recycled content	Weight-% of product / packaging	Weight-% for other included products
<b>Post-consumer recycled material :</b>		
Product	20-30%	14%-30%
Packaging (cardboard)	45-68%	45-68%
<b>Pre-consumer recycled material :</b>		
Product	0-9%	0%-12%
Packaging (cardboard)	23-45%	23-45%
<b>Total recycled material :</b>		
Product	30%	27% – 30%
Packaging (cardboard)	90%	90%

Biogenic content	Biogenic C [kg C / m <sup>2</sup> ]	Biogenic C [kg C / m <sup>2</sup> ] for other included products	Biogenic C %	Biogenic C % for other included products
Product	0,082	0,082	18%	12% - 18%
Packaging (cardboard)	0,006	0,006 – 0,14	44%	44%

## Hazardous substances

At the date of issue of this declaration, there is no “Substance of Very High Concern” (SVHC) in concentration above 0.1% by weight, and neither do their packaging, following the European REACH regulation (Registration, Evaluation, Authorization and Restriction of Chemicals).

The verifier and the program operator do not make any claim nor have any responsibility of the legality of the product.

## LCA information

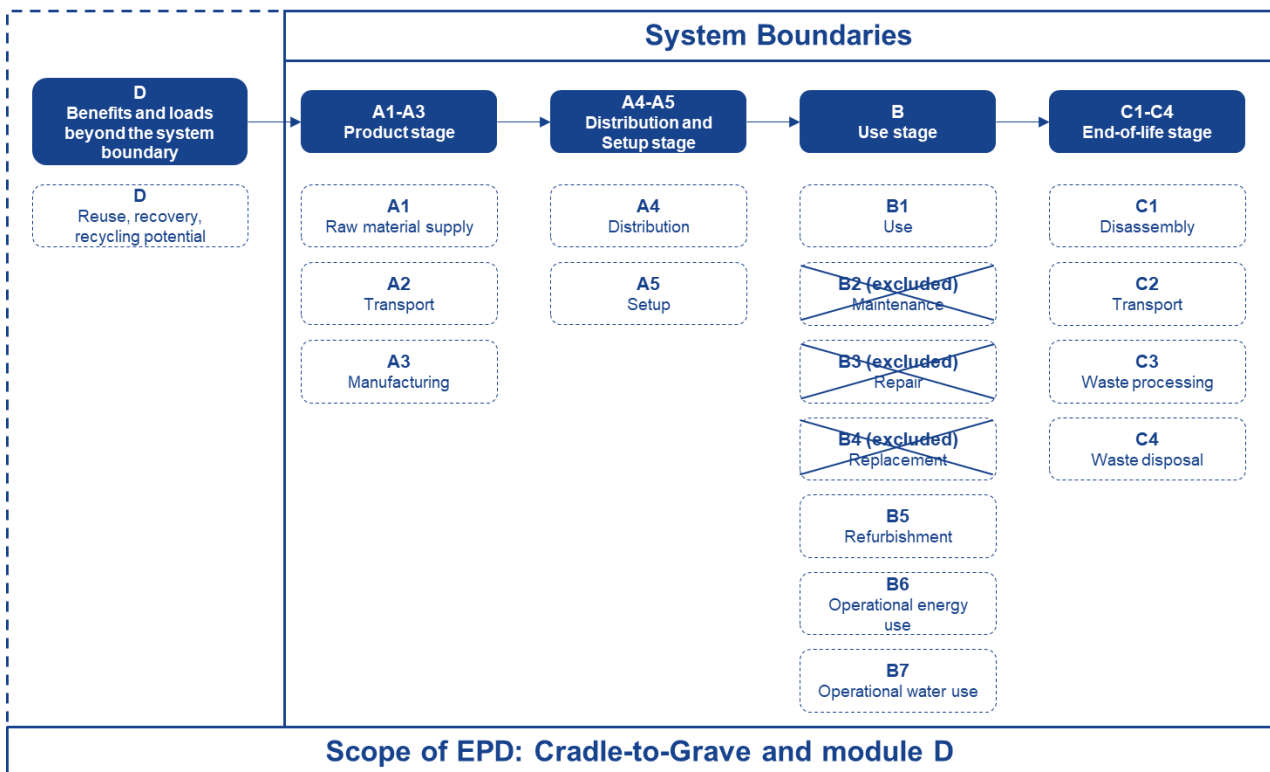
<b>Type of EPD®</b>	<b>Cradle to grave and module D</b>
<b>Declared unit</b>	<b>1 m<sup>2</sup> of coated abrasive</b>
<b>Conversion factor to mass</b>	<b>0,46 kg/m<sup>2</sup> (without packaging)</b>
<b>System boundaries</b>	Modules declared: A1–A5, B1, B5–B7, C1–C4, D (some B modules not declared)
<b>Reference service life (RSL)</b>	Due to the diversity of applications of the product, the Reference Service Life (RSL) cannot be established. The product has numerous applications, and the RSL depends on its use by the customer.
<b>Cut-off rules</b>	<p>All data is available, no cut-off rules has been applied.</p> <p>In the case there is not enough information, the process energy and materials representing less than 1% of the whole energy and mass used can be excluded (if they do not cause significant impacts). The addition of all the inputs and outputs excluded cannot be bigger than the 5% of the whole mass and energy used, as well as total emissions.</p> <p>Flows related to human activities such as employee transport are excluded.</p> <p>Capital goods are excluded since the related flows are supposed to be negligible compared to the products.</p>
<b>Allocation procedures</b>	<p>Allocation has been avoided when possible and when not possible an allocation by physical relationships was applied.</p> <p>The polluter pays, as well the modularity principles have been followed.</p>
<b>Geographical coverage and time period</b>	<p>The geographical scope of the EPD is Europe. Market geographical scope is UK. Details about geographical representativeness is given in system boundaries table below.</p> <p>Data is representative of year 2024.</p>
<b>Background data source</b>	Databases: Sphera 2025.1, Ecoinvent v3.10
<b>Software</b>	“LCA For Experts” provided by Sphera, version 10.9.1.10
<b>Data quality assessment</b>	Data quality of primary and secondary data had been judged by its precision (measured, calculated, or estimated), completeness (e.g., unreported emissions), consistency (degree of uniformity of the methodology applied), and representativeness (geographical, technological, and temporal).

## Description of system boundaries and life cycle stages

Modules declared and their geographical scope are detailed in table below.

	PRODUCT STAGE			DISTRIBUTION AND SETUP STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND SYSTEM BOUNDARY
	Raw material supply	Transport	Manufacturing	Distribution	Setup	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Disassembly	Transport	Waste processing	Waste disposal	Reuse-Recovery Recycling potential
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	X	X	X	X	X	X		ND		X	X	X	X	X	X	X	(X)
Geography	GLO	EU	EU	EU	EU	UK		-		UK	UK	UK	UK	UK	UK	UK	-

Following process flow diagram below clarifies the EPD scope : Cradle-to-Grave and module D. Life cycle stages considered are detailed below.



### A1-A3 Product stage

The product stage is divided into 3 modules. These modules are aggregated in the LCA and EPD results.

### A1. Raw material supply

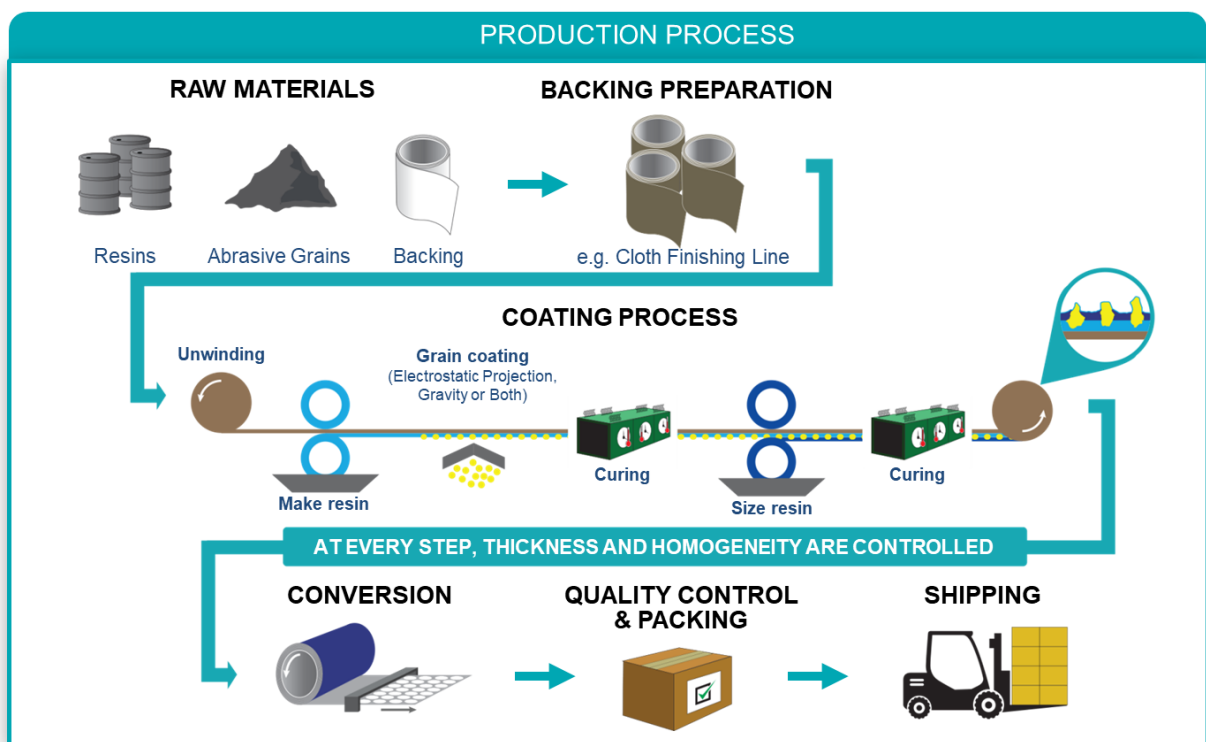
This module includes the extraction and processing of all raw materials of the abrasive (grain, resins, backing...) and packaging which occur upstream to the manufacturing site.

### A2. Transport

This module includes the transportation of raw materials and packaging to the manufacturing site.

### A3. Manufacturing

This module includes the manufacturing of products (mixing, coating, curing, as well as conversion) and all associated impacts: electricity and natural gas consumptions, water consumption, waste management... Simplified production process diagram is proposed below.



### A4-A5 Construction stage

The construction stage is divided into 2 modules:

#### A4. Distribution

This module includes the transport from the manufacturing site to the end-user site. As our product is converted in Poland and EPD scope is UK, the distances considered are 1600km by truck and 40km by boat.

Parameter		
Vehicle type used for transport	Freight Truck	Boat
Fuel type and consumption	Diesel 0,02 kg/(t.km)	HVO 0,005 kg/(t.km)
Distance	1600 km	40 km
Capacity utilization (including empty returns)	0,61	0,48
Bulk density of transported products	266 kg/m <sup>3</sup>	266 kg/m <sup>3</sup>
Volume capacity utilization factor	< 1	< 1

## A5. Setup

This module includes:

the transport and management of packaging waste. (however, no product is wasted at this stage).

Installation of the product onto the machine. As the abrasive is used manually, no energy is needed

## B1-B7 Use stage

The use stage is divided in 7 modules.

### B1. Use

This module includes the emissions related to the product during its use phase, such as emissions resulting from direct use of the product (no emission in this case).

### B2. Maintenance; B3. Repair; B4. Replacement

These modules include the technical operations for maintenance, repair and replacement. They are excluded of the study, according to c-PCR for Abrasive products.

### B5. Refurbishment

These modules include the technical operations for refurbishment. No refurbishment of the product is considered here.

### B6. Operational energy use; B7. Operational water use

These modules include the energy and water used during the operation of the building. Product is used manually (by hand), no operational energy is considered, and no water is necessary.

## C1-C4 End-of-life stage

The end-of-life stage includes 4 modules.

### C1. Disassembly

This module includes the technical operations for disassembly of the product. No impact is considered since the operation is manual.

## **C2. Transport of waste**

This module includes the transport to recycling site or final disposal. Wasted abrasive is transported over 80km by truck. Other parameters (fuel type, utilization, etc) are same than for A4 transportation.

## **C3. Waste processing**

This module includes the collection of waste fractions from the deconstruction and waste processing of material flows intended for reuse, energy recovery or recycling. There is no impact on this stage since all products are considered to be landfilled.

## **C4. Waste Disposal**

This module includes physical pre-treatment and management of the disposal site.

## **D Benefits and loads beyond the system boundary**

This module includes the loads and benefits resulting from reuse, energy recovery or recycling beyond the system boundary for both product and packaging.

100% of the end-of-life waste is assumed to be landfilled, without accounting for any energy recovery through landfill gas valorisation.

Module D includes the input of secondary raw materials : difference of impacts linked to the use of recycled raw materials in the product and packaging, compared to their virgin equivalent.

## **Use and modelling of secondary raw material**

Products in this report contain recycled raw material from post-consumer stream and pre-consumer streams.

End-of-waste status of recycled (both pre-consumer and post-consumer) materials used in products and packaging (A1-A3) is reached when the packaging and products are collected at end of life of previous products.

No impacts are taken for the modelling of waste used to recover the raw material. Transportation from waste collection site to recovery site is taken into account, as well as processing of the waste.

## Data quality declaration and primary data

Data quality is summarized as followed:

<b>Representativeness</b>	
<b>Geographical representativeness</b>	Mainly representative of the European situation (and Country specific when possible)
<b>Technological representativeness</b>	Industry average
<b>Temporal representativeness</b>	As recent as possible & less than 10 years old as a rule.

Table below gives source information, reference year and data category for processes contributing to at least 10% of GWP-GHG in A1-A3:

Background datasets in A1-A3	Source type	Source	Reference year	Data category
Grain aluminium oxide (virgin)	Database	Sphera 2025.1 & Ecoinvent 3.10	2023	Representative secondary data
Paper backing	Database	Ecoinvent 3.10	2023	Representative secondary data
Thermal energy from gas	Database	Sphera 2025.1	2021	Primary data
Hazardous waste incineration	Database	Ecoinvent 3.10	2022	Representative secondary data
Other A1-A3 processes	Databases	Sphera 2025.1 & Ecoinvent 3.10	<5 years old	Primary and secondary data
<b>Total share of primary data, of GWP-GHG results for A1-A3</b>				<b>42%</b>

The share of primary data is calculated based on GWP-GHG results in A1-A3. It is a simplified indicator for data quality that supports the use of more primary data, to increase the representativeness of and comparability between EPDs. Note that the indicator does not capture all relevant aspects of data quality and is not comparable across product categories.

## Environmental performance

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As specified in EN 15804:2012+A2:2019/AC:2021 and the Product-Category Rules, the environmental impacts are declared and reported using the baseline characterization factors from the “EN15804+A2 (based on EF 3.1)” characterization method available in the “LCA for Experts” software. Raw materials and energy consumptions, as well as transport distances have been taken directly from the manufacturing plant.

The estimated impact results are only relative statements which do not indicate the end points of the impact categories, exceeding threshold values, safety margins or risks.

All emissions to air, water, and soil, and all materials and energy used have been included.

Foreground modelling of infrastructures is excluded, but infrastructures are still included in used datasets.








The results of the impact categories abiotic depletion of minerals and metals, land use, human toxicity (cancer), human toxicity, noncancer and ecotoxicity (freshwater) may be highly uncertain in LCAs that include capital goods/infrastructure in generic datasets, in case infrastructure/capital goods contribute greatly to the total results. This is because the LCI data of infrastructure/capital goods used to quantify these indicators in currently available generic datasets sometimes lack temporal, technological and geographical representativeness. Caution should be exercised when using the results of these indicators for decision-making purposes.

The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3).

**All results refer to a declared unit of 1 m<sup>2</sup> of G156 grit 120 as 115mm x 10m roll.**

Following results are similarly valid for all G156 grit 120 products covered in this EPD. Conversion factors are provided in “Additional Environmental Information” section for grit sizes 60 and 80.











## Environmental Impacts – 1 m<sup>2</sup> G156 Grit 120

Environmental indicators	PRODUCT STAGE	DISTRIBUTION AND SETUP STAGE		USE STAGE								END OF LIFE STAGE				BENEFITS AND LOADS BEYOND SYSTEM BOUNDARY
	A1 / A2 / A3	A4 Distribution	A5 Setup	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Disassembly	C2 Transport	C3 Waste processing	C4 Waste disposal	D Reuse, recovery, recycling potential	
 Climate Change - total [kg CO2 eq.]	1,3E+00	5,7E-02	3,4E-02	0	ND	ND	ND	0	0	0	0	2,8E-03	0	4,8E-01	1,1E-01	
Climate Change - fossil [kg CO2 eq.]	1,6E+00	5,7E-02	1,0E-03	0	ND	ND	ND	0	0	0	0	2,7E-03	0	1,9E-02	1,2E-01	
Climate Change - biogenic [kg CO2 eq.]	-2,9E-01	1,2E-04	3,3E-02	0	ND	ND	ND	0	0	0	0	5,8E-06	0	4,6E-01	-4,7E-03	
Climate Change - land use and land use change [kg CO2 eq.]	4,7E-03	5,9E-04	2,0E-06	0	ND	ND	ND	0	0	0	0	2,9E-05	0	3,5E-05	-1,3E-04	
 Ozone depletion [kg CFC-11 eq.]	2,7E-08	6,8E-15	1,9E-15	0	ND	ND	ND	0	0	0	0	3,3E-16	0	4,4E-14	3,4E-09	
 Acidification [Mole of H+ eq.]	3,6E-03	8,7E-05	4,7E-06	0	ND	ND	ND	0	0	0	0	3,6E-06	0	1,0E-04	4,2E-04	
Eutrophication - freshwater [kg P eq.]	2,1E-04	1,6E-07	1,0E-07	0	ND	ND	ND	0	0	0	0	7,5E-09	0	3,1E-06	2,5E-05	
 Eutrophication - marine [kg N eq.]	1,3E-03	3,2E-05	2,8E-06	0	ND	ND	ND	0	0	0	0	1,4E-06	0	4,8E-05	-4,8E-05	
Eutrophication - terrestrial [Mole of N eq.]	1,0E-02	3,4E-04	1,7E-05	0	ND	ND	ND	0	0	0	0	1,5E-05	0	3,3E-04	1,1E-03	
 Photochemical ozone formation - human health [kg NMVOC eq.]	3,3E-03	7,2E-05	1,0E-05	0	ND	ND	ND	0	0	0	0	3,1E-06	0	1,7E-04	4,3E-04	
 Resource use, minerals and metals [kg Sb eq.] <sup>1</sup>	4,5E-06	3,8E-09	4,5E-11	0	ND	ND	ND	0	0	0	0	1,9E-10	0	9,2E-10	9,1E-08	
Resource use, fossils [MJ] <sup>1</sup>	3,0E+01	7,4E-01	1,4E-02	0	ND	ND	ND	0	0	0	0	3,6E-02	0	2,7E-01	1,6E+00	
 Water use [m <sup>3</sup> world equiv.] <sup>1</sup>	8,2E-01	2,3E-04	6,7E-05	0	ND	ND	ND	0	0	0	0	1,1E-05	0	1,6E-03	4,7E-02	









<sup>1</sup>The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.

## Resource Use - 1 m<sup>2</sup> G156 Grit 120


Resource use indicators are calculated using the method presented as “option B” in Annex 3 of PCR 2019:14 “Construction Products” v2.0.1.

Resource use indicators	PRODUCT STAGE	DISTRIBUTION AND SETUP STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND SYSTEM BOUNDARY
	A1 / A2 / A3	A4 Distribution	A5 Setup	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Disassembly	C2 Transport	C3 Waste processing	C4 Waste disposal	D Reuse, recovery, recycling potential
 Use of renewable primary energy (PERE) [MJ]	4,4E+00	5,4E-02	1,5E-03	0	ND	ND	ND	0	0	0	0	2,6E-03	0	3,6E-02	3,0E+00
 Primary energy resources used as raw materials (PERM) [MJ]	2,7E+00	0	0	0	ND	ND	ND	0	0	0	0	0	0	0	0
 Total use of renewable primary energy resources (PERT) [MJ]	7,1E+00	5,4E-02	1,5E-03	0	ND	ND	ND	0	0	0	0	2,6E-03	0	3,6E-02	3,0E+00
 Use of non-renewable primary energy (PENRE) [MJ]	3,0E+01	7,4E-01	1,4E-02	0	ND	ND	ND	0	0	0	0	3,6E-02	0	2,7E-01	1,6E+00
 Non-renewable primary energy resources used as raw materials (PENRM) [MJ]	4,0E+00	0	0	0	ND	ND	ND	0	0	0	0	0	0	0	0
 Total use of non-renewable primary energy resources (PENRT) [MJ]	3,4E+01	7,4E-01	1,4E-02	0	ND	ND	ND	0	0	0	0	3,6E-02	0	2,7E-01	1,6E+00
 Input of secondary material (SM) [kg]	1,5E-01	0	0	0	ND	ND	ND	0	0	0	0	0	0	0	-1,5E-01
 Use of renewable secondary fuels (RSF) [MJ]	0	0	0	0	ND	ND	ND	0	0	0	0	0	0	0	0
 Use of non-renewable secondary fuels (NRSF) [MJ]	0	0	0	0	ND	ND	ND	0	0	0	0	0	0	0	0
 Use of net fresh water (FW) [m3]	2,0E-02	2,6E-05	2,0E-06	0	ND	ND	ND	0	0	0	0	1,3E-06	0	4,7E-05	1,1E-03

## Waste Category & Output flows - 1 m<sup>2</sup> G156 Grit 120

Waste category & output flows	PRODUCT STAGE	DISTRIBUTION AND SETUP STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND SYSTEM BOUNDARY
	A1 / A2 / A3	A4 Distribution	A5 Setup	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Disassembly	C2 Transport	C3 Waste processing	C4 Waste disposal	D Reuse, recovery, recycling potential
 Hazardous waste disposed (HWD) [kg]	1,4E-01	2,7E-11	2,2E-12	0	ND	ND	ND	0	0	0	0	1,3E-12	0	4,9E-11	4,6E-02
 Non-hazardous waste disposed (NHWD) [kg]	8,5E-02	9,7E-05	9,6E-03	0	ND	ND	ND	0	0	0	0	4,7E-06	0	4,1E-01	-3,7E-02
 Radioactive waste disposed (RWD) [kg]	5,2E-04	9,7E-07	1,7E-07	0	ND	ND	ND	0	0	0	0	4,7E-08	0	3,4E-06	-1,2E-04
 Components for re-use (CRU) [kg]	0	0	0	0	ND	ND	ND	0	0	0	0	0	0	0	0
 Materials for Recycling (MFR) [kg]	0	0	0	0	ND	ND	ND	0	0	0	0	0	0	0	0
 Material for Energy Recovery (MER) [kg]	0	0	0	0	ND	ND	ND	0	0	0	0	0	0	0	0
 Exported electrical energy (EEE) [MJ]	0	0	0	0	ND	ND	ND	0	0	0	0	0	0	0	0
 Exported thermal energy (EET) [MJ]	0	0	0	0	ND	ND	ND	0	0	0	0	0	0	0	0

## Additional mandatory indicators from EN 15804 - 1 m<sup>2</sup> G156 Grit 120

Additional indicator from EN 15804	PRODUCT STAGE	DISTRIBUTION AND SETUP STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND SYSTEM BOUNDARY
	A1 / A2 / A3	A4 Distribution	A5 Setup	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Disassembly	C2 Transport	C3 Waste processing	C4 Waste disposal	D Reuse, recovery, recycling potential
 GWP - GHG [kg CO2 eq.]	1,6E+00	5,7E-02	1,4E-02	0	ND	ND	ND	0	0	0	0	2,8E-03	0	2,0E-01	1,1E-01

The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus almost equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

## Biogenic carbon content - 1 m<sup>2</sup> G156 Grit 120

Biogenic carbon content	A1 / A2 / A3
 Biogenic carbon content in product [kg]	8,3E-02
 Biogenic carbon content in packaging [kg]	5,7E-03

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO<sub>2</sub>.

The product's biogenic carbon content comes from the paper backing. Regarding the packaging, it comes from the cardboard.

## EPD® of multiple products: results variation between products

### Variation between sites – A1-A3 – GWP-GHG

All G156 products are manufactured on a single site, hence no variation between sites is to be reported (0% variation).

### Variation between products – A1-A3 – GWP-GHG

As required for EPDs of multiple products, this section declares the maximum variation of GWP-GHG results between the reference product and the products furthest away from it over modules A1-A3.

It allows the reader to know to which extent the multiple products gathered in the same EPD have a similar manufacturing GWP-GHG impact.

In the case of Liberty Green range, the variations of impacts are mainly due to different grit sizes, and also to packaging (packaging quantity per square meter varies a lot). Reference product being the one with smallest grit size and packaging per square meter, it represents a minimum among the considered product range.

Results variation compared to reference product	A1-A3	
	Min	Max
GWP-GHG	0%	+56%

### Variations between products – A-C – LCIA indicators

As required for EPDs of multiple products, this table declares the maximum variation of environmental impacts between the reference product and the products furthest away from it over stages A to C, including the use phase and end-of-life.

In the case of Liberty Green range, the variation of impacts is coming mainly from A1-A3, as seen above.

Results variation compared to reference product	A-C	
	Min	Max
Climate Change - total [kg CO2 eq.]	0%	+67%
Climate Change - fossil [kg CO2 eq.]	0%	+59%
Climate Change - biogenic [kg CO2 eq.]	0%	+129%
Climate Change - land use and land use change [kg CO2 eq.]	0%	+64%
Ozone depletion [kg CFC-11 eq.]	0%	+61%
Acidification [Mole of H+ eq.]	0%	+111%
Eutrophication - freshwater [kg P eq.]	0%	+149%
Eutrophication - marine [kg N eq.]	0%	+85%
Eutrophication - terrestrial [Mole of N eq.]	0%	+87%
Photochemical ozone formation - human health [kg NMVOC eq.]	0%	+84%
Resource use, minerals and metals [kg Sb eq.] <sup>1</sup>	0%	+49%
Resource use, fossils [MJ]	0%	+51%
Water use [m <sup>3</sup> world equiv.]	0%	+116%

Results variation compared to reference product	A-C	
	Min	Max
GWP - GHG	0%	+67%

## Additional environmental information

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### Conversion factors for other products included in the EPD

Additionally to the minimum and maximum variations declared in previous chapter, the conversion factors provided in the tables below can be used to convert results for the declared reference product G156 Grit 120 into results for the other G156 grit sizes included in this EPD. Tables are provided for rolls in grits 60 and 80 (valid for 5m rolls as well as 10m rolls)

Note that, additionally to these rolls, variations reported in previous chapter include sheets in dimensions 230mm x 280mm in Grit 60, 80 and 120.

Conversion factors are provided for every module declared and on which environmental impacts are reported (non-zero values) and are applicable to environmental impact indicators only.

**Conversion factors are meant to be multiplied by the corresponding value (same module, same indicator) in the declared results of the reference product.**

**Grit size 60 :**

<p><b>Conversion factors</b> for Environmental indicators</p> <p>To use this table, multiply by the corresponding value for reference product</p>	PRODUCT STAGE	DISTRIBUTION AND SETUP STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND SYSTEM BOUNDARY
	A1 / A2 / A3	A4 Distribution	A5 Setup	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Disassembly	C2 Transport	C3 Waste processing	C4 Waste disposal	D Reuse, recovery, recycling potential
Climate Change - total	1,3E+00	1,4E+00	1,7E+00	-	-	-	-	-	-	-	-	1,4E+00	-	1,0E+00	1,8E+00
Climate Change - fossil	1,2E+00	1,4E+00	1,7E+00	-	-	-	-	-	-	-	-	1,4E+00	-	1,2E+00	1,7E+00
Climate Change - biogenic	1,0E+00	1,4E+00	1,7E+00	-	-	-	-	-	-	-	-	1,4E+00	-	1,0E+00	9,7E-01
Climate Change - land use and land use change	1,2E+00	1,4E+00	1,7E+00	-	-	-	-	-	-	-	-	1,4E+00	-	1,4E+00	6,6E-01
Ozone depletion	1,4E+00	1,4E+00	1,7E+00	-	-	-	-	-	-	-	-	1,4E+00	-	1,2E+00	1,7E+00
Acidification	1,3E+00	1,4E+00	1,7E+00	-	-	-	-	-	-	-	-	1,4E+00	-	1,2E+00	1,5E+00
Eutrophication - freshwater	1,3E+00	1,4E+00	1,7E+00	-	-	-	-	-	-	-	-	1,4E+00	-	1,3E+00	1,5E+00
Eutrophication - marine	1,2E+00	1,4E+00	1,7E+00	-	-	-	-	-	-	-	-	1,4E+00	-	1,1E+00	-1,8E-01
Eutrophication - terrestrial	1,3E+00	1,4E+00	1,7E+00	-	-	-	-	-	-	-	-	1,4E+00	-	1,2E+00	1,6E+00
Photochemical ozone formation - human health	1,3E+00	1,4E+00	1,7E+00	-	-	-	-	-	-	-	-	1,4E+00	-	1,1E+00	1,6E+00
Resource use, minerals and metals	1,3E+00	1,4E+00	1,7E+00	-	-	-	-	-	-	-	-	1,4E+00	-	1,2E+00	1,8E+00
Resource use, fossils	1,2E+00	1,4E+00	1,7E+00	-	-	-	-	-	-	-	-	1,4E+00	-	1,2E+00	1,9E+00
Water use	1,3E+00	1,4E+00	1,7E+00	-	-	-	-	-	-	-	-	1,4E+00	-	1,3E+00	1,4E+00

Conversion factors for grit size 60

**Grit size 80 :**

	PRODUCT STAGE	DISTRIBUTION AND SETUP STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND SYSTEM BOUNDARY
	A1 / A2 / A3	A4 Distribution	A5 Setup	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Disassembly	C2 Transport	C3 Waste processing	C4 Waste disposal	D Reuse, recovery, recycling potential
<b>Conversion factors for Environmental indicators</b>															
<b>To use this table, multiply by the corresponding value for reference product</b>															
Climate Change - total	1,1E+00	1,2E+00	1,7E+00	-	-	-	-	-	-	-	-	1,2E+00	-	1,0E+00	1,3E+00
Climate Change - fossil	1,1E+00	1,2E+00	1,7E+00	-	-	-	-	-	-	-	-	1,2E+00	-	1,1E+00	1,3E+00
Climate Change - biogenic	1,1E+00	1,2E+00	1,7E+00	-	-	-	-	-	-	-	-	1,2E+00	-	1,0E+00	1,0E+00
Climate Change - land use and land use change	1,1E+00	1,2E+00	1,7E+00	-	-	-	-	-	-	-	-	1,2E+00	-	1,2E+00	9,4E-01
Ozone depletion	1,2E+00	1,2E+00	1,7E+00	-	-	-	-	-	-	-	-	1,2E+00	-	1,1E+00	1,3E+00
Acidification	1,2E+00	1,2E+00	1,7E+00	-	-	-	-	-	-	-	-	1,2E+00	-	1,1E+00	1,2E+00
Eutrophication - freshwater	1,2E+00	1,2E+00	1,7E+00	-	-	-	-	-	-	-	-	1,2E+00	-	1,1E+00	1,2E+00
Eutrophication - marine	1,1E+00	1,2E+00	1,7E+00	-	-	-	-	-	-	-	-	1,2E+00	-	1,1E+00	5,3E-01
Eutrophication - terrestrial	1,1E+00	1,2E+00	1,7E+00	-	-	-	-	-	-	-	-	1,2E+00	-	1,1E+00	1,3E+00
Photochemical ozone formation - human health	1,2E+00	1,2E+00	1,7E+00	-	-	-	-	-	-	-	-	1,2E+00	-	1,0E+00	1,3E+00
Resource use, minerals and metals	1,1E+00	1,2E+00	1,7E+00	-	-	-	-	-	-	-	-	1,2E+00	-	1,1E+00	1,3E+00
Resource use, fossils	1,1E+00	1,2E+00	1,7E+00	-	-	-	-	-	-	-	-	1,2E+00	-	1,1E+00	1,4E+00
Water use	1,1E+00	1,2E+00	1,7E+00	-	-	-	-	-	-	-	-	1,2E+00	-	1,1E+00	1,2E+00

Conversion factors for grit size 80

## Electricity information

Conflans site in France where abrasive paper is manufactured is using grid electricity. Its consumption has been modelled using a market approach (residual mix), as described below.

Type of information	Description																										
<b>Location</b>	France																										
<b>Energy sources for electricity</b>	<table border="1"> <thead> <tr> <th></th> <th>FR - AIB residual mix</th> </tr> </thead> <tbody> <tr> <td><b>RE unspecified</b></td> <td>0,00%</td> </tr> <tr> <td><b>RE biomass</b></td> <td>1,15%</td> </tr> <tr> <td><b>RE solar</b></td> <td>2,66%</td> </tr> <tr> <td><b>RE geothermal</b></td> <td>0,02%</td> </tr> <tr> <td><b>RE wind</b></td> <td>1,44%</td> </tr> <tr> <td><b>RE hydro</b></td> <td>0,32%</td> </tr> <tr> <td><b>Nuclear</b></td> <td>72,86%</td> </tr> <tr> <td><b>FO unspecified</b></td> <td>0,44%</td> </tr> <tr> <td><b>FO hard coal</b></td> <td>5,40%</td> </tr> <tr> <td><b>FO lignite</b></td> <td>0,01%</td> </tr> <tr> <td><b>FO oil</b></td> <td>0,76%</td> </tr> <tr> <td><b>FO gas</b></td> <td>14,94%</td> </tr> </tbody> </table>		FR - AIB residual mix	<b>RE unspecified</b>	0,00%	<b>RE biomass</b>	1,15%	<b>RE solar</b>	2,66%	<b>RE geothermal</b>	0,02%	<b>RE wind</b>	1,44%	<b>RE hydro</b>	0,32%	<b>Nuclear</b>	72,86%	<b>FO unspecified</b>	0,44%	<b>FO hard coal</b>	5,40%	<b>FO lignite</b>	0,01%	<b>FO oil</b>	0,76%	<b>FO gas</b>	14,94%
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<b>Dataset and source</b>	Ecoinvent 3.10 residual mix (medium voltage) Based on AIB 2023 data (mix for year 2022)																										
<b>CO<sub>2</sub> emission kg CO<sub>2</sub> eq. / kWh</b>	0.188 kg of CO <sub>2</sub> eq/kWh – GWP-GHG indicator																										

Regarding conversion, its electricity contributes to less than 1% of total GWP for reference product. No cut-off was applied and it has been included in result, but we don't consider necessary to provide detailed information about its modelling and impact.

## Abbreviations

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DU	Declared unit
EPD	Environmental Product Declaration
eq.	equivalents
FU	Functional unit
g	gram
GJ	Giga Joules (as Net Calorific Value)
kg	kilogram
kWh	kilowatt-hour
L	liter
LCA	Life Cycle Analysis
LCI	Life Cycle Inventory
LCIA	Life Cycle Impact Assessment
MJ	Mega Joules (as Net Calorific Value)
PC	Post Consumer
PCR	Product Category Rules
PIR	Post Industrial
RSL	Reference Service Life (in years)
SGSS	Saint-Gobain Surface Solutions
ton or t	metric ton
UK	United Kingdom

## References

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1. ISO 14040:2006 Environmental Management-Life Cycle Assessment-Principles and framework.
2. ISO 14044:2006 Environmental Management-Life Cycle Assessment-Requirements and guidelines.
3. EN 15804:2012+A1:2013 - Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products
4. EN 15804:2012+A2:2019/AC:2021 - Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products
5. EPD International. General Program Instructions (GPI) for the International EPD® System (version 5.0.1) [www.environdec.com](http://www.environdec.com).
6. The International EPD System PCR 2019:14 Construction products and Construction services. Version 2.0.1
7. EN 15941 Sustainability of construction works - Data quality for environmental assessment of products and construction work - Selection and use of data
8. c-PCR-030 Abrasive Products, version 2024-06-20
9. European Chemical Agency, Candidate List of substances of very high concern for Authorization. <https://echa.europa.eu/candidate-list-table>
10. LCA report name: Environmental Product Declaration of Coated Abrasive Products (hand use)

## Version history

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Original version of the EPD, 2026-04-01