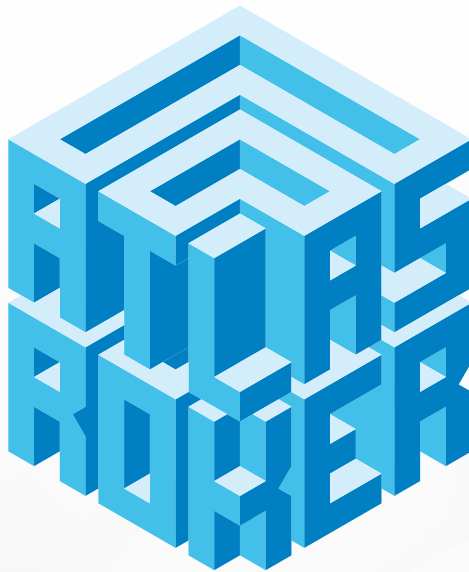




ENVIRONMENTAL PRODUCT DECLARATION

ATLAS ROKER

External Thermal Insulation Composite System with mineral wool boards (MW)
in accordance with ISO 14025 and EN 15804





ENVIRONMENTAL PRODUCT DECLARATION

ENVIRONMENTAL PRODUCT DECLARATION

ATLAS ROKER
External Thermal Insulation Composite System
with mineral wool boards (MW)

Manufacturer:

ATLAS spółka z o.o.
ul. Św. Teresy 105
91-222 Łódź
Poland
atlas@atlas.com.pl
www.atlas.com.pl

Manufacturing sites information

Zakład Produkcyjny
PIOTRKÓW TRYBUNALSKI,
ul. Wronia 61/63
97-300 Piotrków Trybunalski,
Poland

Zakład Produkcyjny
BYDGOSZCZ,
ul. Przemysłowa 32
85-758 Bydgoszcz,
Poland

Zakład Produkcyjny
DĄBROWA GÓRNICZA,
ul. Roździeńskiego 2
41-306 Dąbrowa Górnicza,
Poland

Zakład Produkcyjny
SUWAŁKI,
Dubowo II nr 33
16-400 Suwałki,
Poland

Wytwórnia Klejów i Zapraw Budowlanych S.A.
ul. Szczawińska 52A
95-100 Zgierz,
Poland

ATLAS ROKER

External Thermal Insulation Composite System with mineral wool boards (MW) in accordance with ISO 14025 and EN 15804

1. BASIC INFORMATION

This declaration is the type III Environmental Product Declaration (EPD) based on EN 15804 and verified according to ISO 14025. It contains information about the impact of declared construction materials on environment and their aspects verified by the independent Advisory Board according to ISO 14025. Basically, a comparison or evaluation of EPD data is possible only if all the compared data were created according to EN 15804 (see point 5.3 of the norm) and the building context.

Issuance date: 10.03.2019

Validity date: 10.03.2024

Declared durability: 50 years

2. LIFE CYCLE ASSESSMENT (LCA)

Declared unit

The declaration refers to 1 m² of complete ETICS.

System limits

The life cycle analysis of the examined products covers A1-A3 modules (Cradle to Gate) in accordance with EN 15804. Its include production, including raw materials extraction and energy provision up to the finished, packed product at the factory gate. Processes whose total contribution to the final result, according to mass looked at, is less than 0.5 % was ignored.

Data collection period

The data for manufacture of the examined products refer to the year 2017. The life cycle assessments were prepared for Poland as reference area.

Data quality

The values determined to calculate the LCA originate from verified Atlas inventory data.

Assumptions and estimates

The impacts of the representative ATLAS products for each ETICS layer were aggregated using weighted average. The weighted average method was used according to the percentage of each product in ETICS based on the relation to whole production quantity. Impacts for each product and factory were inventoried and calculated separately.

Databases

The data for the processes come from the following databases: Ecoinvent, Ullmann's, Plastic-Europe, ITB-Data, SPC, specific EPDs.

3. PRODUCT INFORMATION

ATLAS ROKER is a trade name for External Thermal Insulation Composite System, which comprises insulation board (bonded and mechanically fixed) with reinforced undercoat, and decorative finishes as described in Technical Approval AT-15-2930/2016 (Domestic Approval). The system is complete and equipped with a vast selection of adhesives, base coats, renders and decorative coats of various colours. The system provides variety of solutions depending on requirements of the investors, building designers and construction workers. ATLAS ROKER also offers a wide range of solutions for all building types, from detached houses to multi-storey developments. It is fully certified and the exact specification is tailored to meet the requirements of each project, whether residential or commercial, in compliance with all current building regulations in Poland.

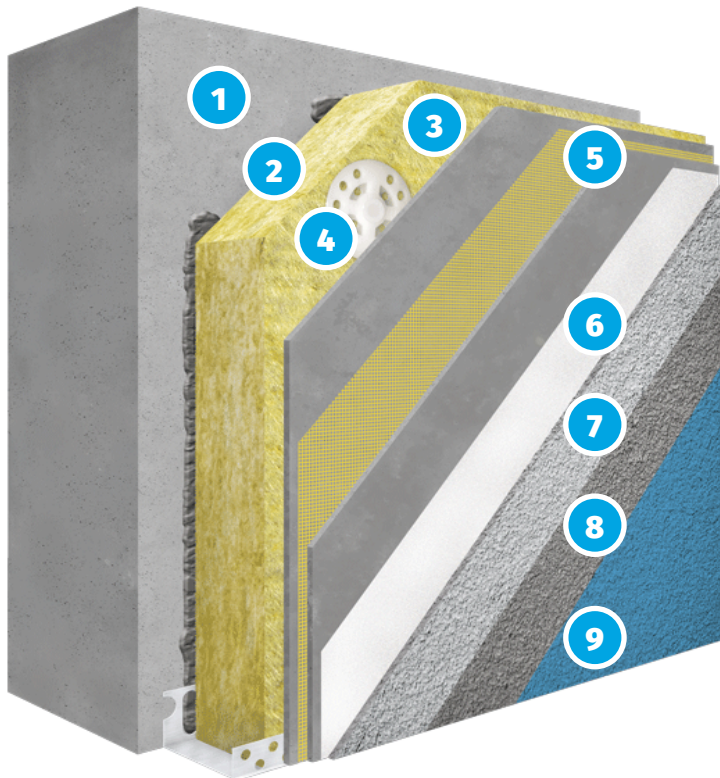
4. PRODUCT DESCRIPTION

The set of products for Atlas ROKER under this EPD is shown below in [Table 1](#) and on [Figure 1](#).

Table 1. ATLAS ROKER components

Intended scope	Trade name	
Adhesives for bonding the insulation product	ATLAS STOPTER K-50 ATLAS ROKER W ATLAS ROKER U	
Insulation product *)	Factory-prefabricated boards, made by mineral wool slabs (MW) according to PN-EN 13164	
Reinforced layer	Adhesives for base coat	ATLAS STOPTER K-50 ATLAS ROKER W ATLAS ROKER U
	Glass fibre meshes *)	AKE 145 SSA 1363-150 SM0.5 ASGLATEX 03-43 VERTEX 145 ATLAS 150 ATLAS 165
Key coats	ATLAS CERPLAST ATLAS SILKAT ASX ATLAS SILKON ANX	
Finishing coats	ATLAS CERMIT mineral ATLAS CERMIT WN mineral TYNK SILIKONOWY ATLAS TYNK SILIKONOWO-SILIKATOWY ATLAS	
Primers	ATLAS ARKOL SX ATLAS ARKOL NX ATLAS BEJCA	
Decorative coats	ATLAS SALTA ATLAS SALTA S ATLAS SALTA N	
Ancillary materials *)	Anchors, special fittings (e.g. base profiles, corner profiles...)	

*) products from suppliers, ATLAS does not produce these items.



Layers' arrangement in the ATLAS ROKER system is shown on [Figure 1](#)

1. Wall structure (substrate)
2. Adhesive (basic fixing)
3. Thermal insulation (MW)
4. Anchor (additional fixing)
5. Reinforced layer (base coat with glass fibre mesh embedded)
6. Key coating (if necessary)
7. Finishing coat (renders)
8. Primers (optional)
9. Decorative coats (optional)

Accordingly, environmental characteristics (LCA) for ATLAS ROKER are presented in a few cases, depending on:

- kind of finishing coat (mineral, silicone or silicone-silicate (mixed), and
- thickness of MW boards for reference cases 10 cm, 12 cm, 15 cm, 20 cm or 25 cm.

5. PRODUCT MANUFACTURE

The figures below show the working process during the production of dry mixes ([Figure 2](#)), ready-to-use renders ([Figure 3](#)) and paints ([Figure 4](#)). The raw materials are stored in the production factory in silos, big bags, or sacks accordingly. According to the applicable formulation, they are dosed and intensely mixed. Next, products are filled into containers (or packed into paper bags – dry mixes) and send to quality control. Then, they are temporarily stored, or delivered directly as ready-to-use products.

6. PRODUCT APPLICATION

The thermal insulation technology, used in fixing thermal insulation, is made of mineral wool (MW) to the substrate and preparation of a reinforced layer, a render coating and, a paint coating (optionally). The system can be applied both on new, or existing external surfaces of vertical building walls (already plastered, or not) made of masonry, or adhered materials, such as bricks and blocks (ceramic, lime-sand, stone, cellular concrete), or of concrete (poured at the construction site, or in the form of prefabricated elements).

Occupational safety and environmental protection

Occupational safety and environmental protection are described in Material Safety Data Sheets (MSDS) for each product.

Note

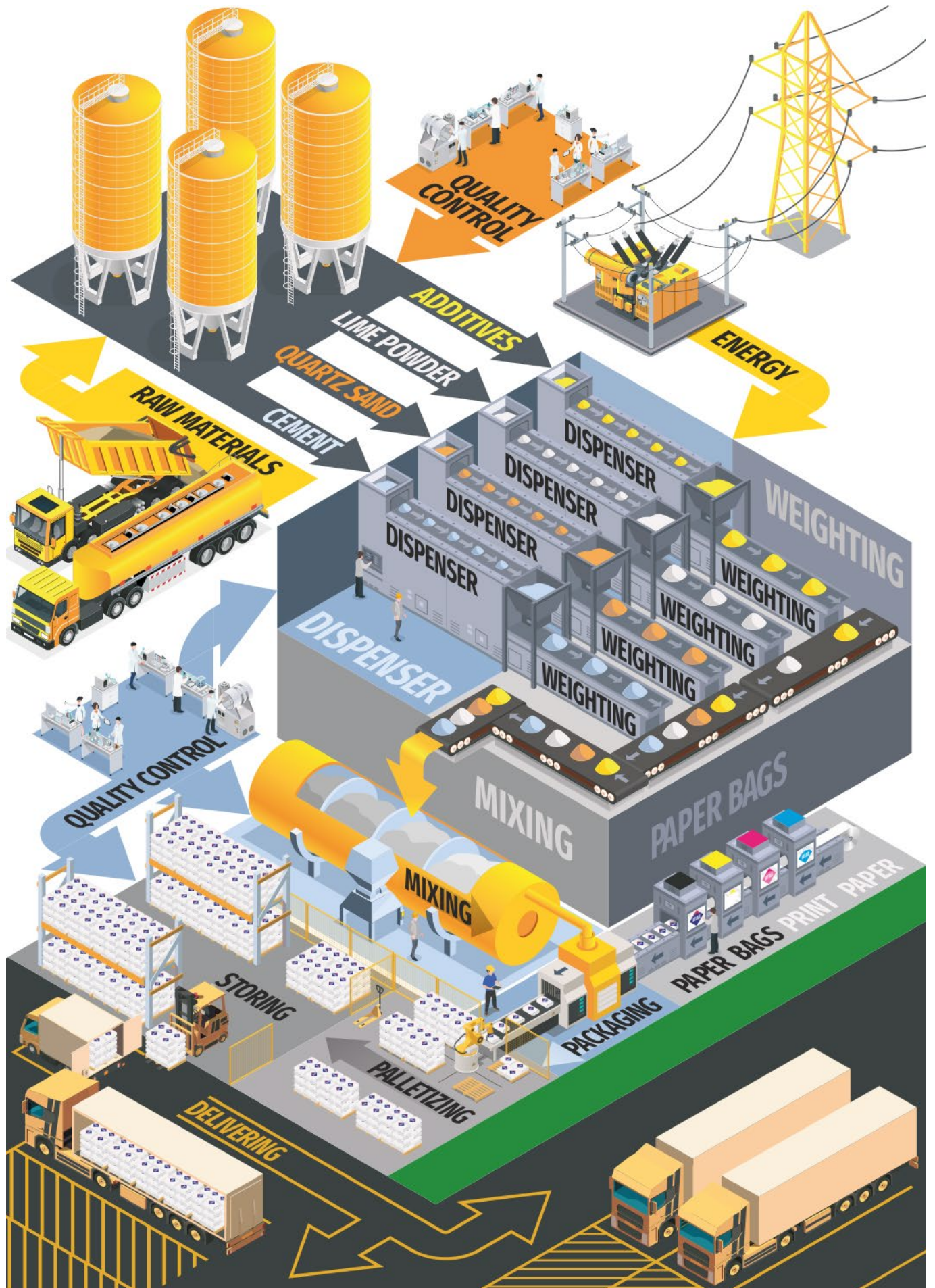
Specific information on application and other actions with these products are described in detail in the Technical Data Sheet available on the producer website www.atlas.com.pl.

7. ENVIRONMENTAL CHARACTERISTICS (LCA)

The results of the LCA with the indicators as per EPD requirements are given in the following tables for product manufacture (A1, A2, A3 modules).

ATLAS ROKER
External Thermal Insulation Composite System with mineral wool boards (MW)
in accordance with ISO 14025 and EN 15804

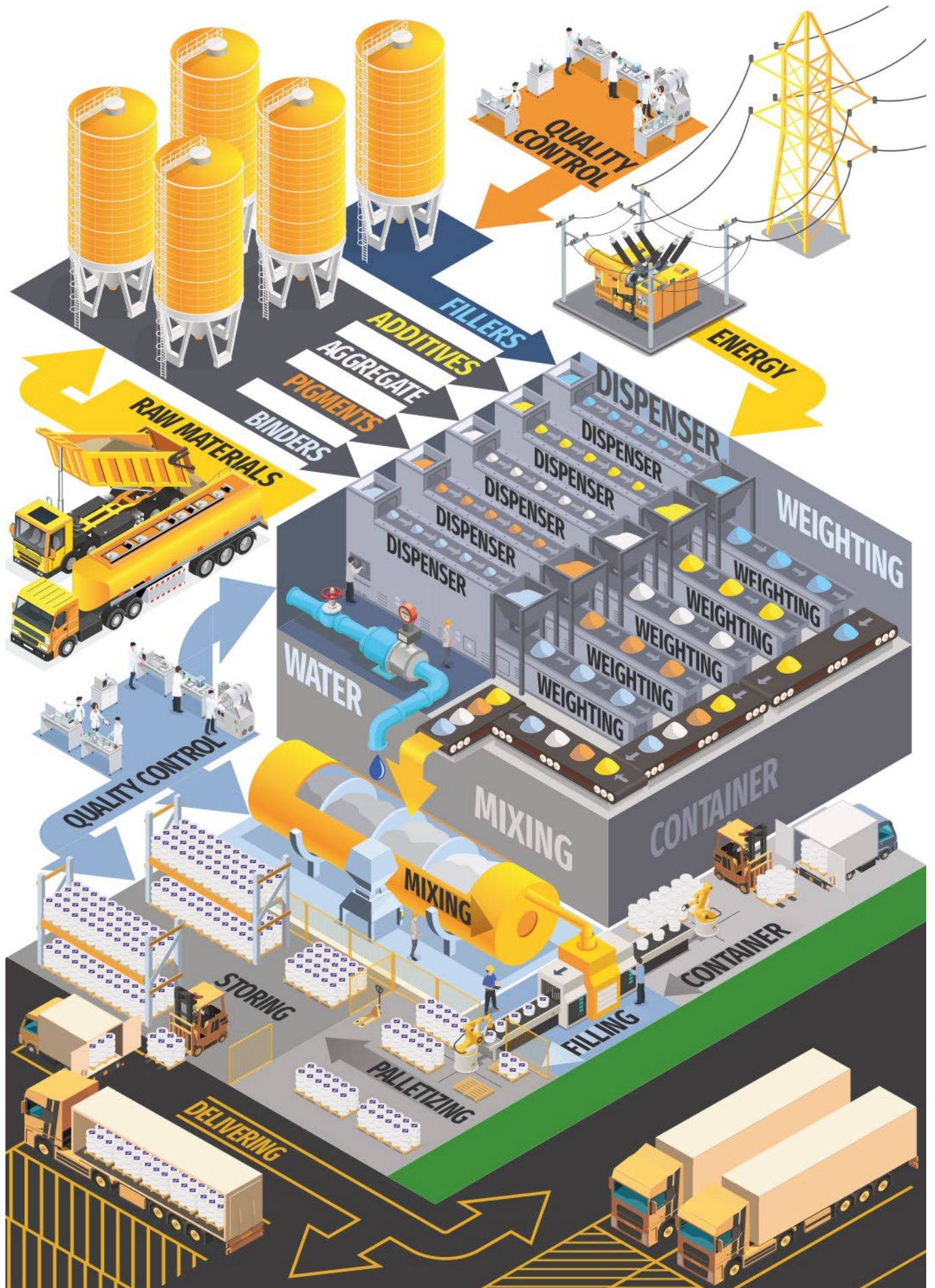
Figure 2. Production process – dry mixes (scheme)





ENVIRONMENTAL PRODUCT DECLARATION

Figure 3. Production process – ready-to-use renders (scheme)



ATLAS ROKER
External Thermal Insulation Composite System with mineral wool boards (MW)
in accordance with ISO 14025 and EN 15804

Figure 4. Production process – paints and primers (scheme)





ENVIRONMENTAL PRODUCT DECLARATION

Table 2. Environmental characteristic for 1 m² of Atlas ROKER (mineral renders), 10 cm MW

Environmental assessment information (MND – Module not declared, MD – Module Declared)																		
Product stage			Construction process		Use stage							End of life			Benefits and loads beyond the system boundary			
Raw material supply	Transport	Manufacturing	Transport to construction site	Construction-installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse-recovery-recycling potential		
	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3		C4	D
	MD	MD	MD	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND		MND	MND
Environmental impacts: 1 m ²																		
Indicator												Unit	A1	A2	A3	A1-A3		
Global warming potential												[kg CO ₂ eq.]	2,60E+01	1,02E-01	3,66E-01	2,65E+01		
Depletion potential of the stratospheric ozone layer												[kg CFC 11 eq.]	9,21E-05	0,00E+00	0,00E+00	9,21E-05		
Acidification potential of soil and water												[kg SO ₂ eq.]	1,02E-01	7,63E-04	1,05E-04	1,03E-01		
Eutrophication potential												[kg (PO ₄) ³⁻ eq.]	4,16E-03	5,33E-05	8,45E-06	4,22E-03		
Formation potential of tropospheric ozone												[kg Ethene eq.]	1,26E-02	1,35E-04	6,02E-05	1,28E-02		
Abiotic depletion potential (ADP-elements) for non-fossil resources												[kg Sb eq.]	1,38E-01	0,00E+00	1,36E-06	1,38E-01		
Abiotic depletion potential (ADP-fossil fuels) for fossil resources												[MJ]	2,40E+02	9,13E-01	4,21E+00	2,45E+02		
Environmental aspects on resource use: 1 m ²																		
Indicator												Unit	A1	A2	A3	A1-A3		
Use of renewable primary energy excluding renewable primary energy resources used as raw materials												[MJ]	INA	INA	INA	INA		
Use of renewable primary energy resources used as raw materials												[MJ]	INA	INA	INA	INA		
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)												[MJ]	6,09E+00	3,67E-02	1,28E-01	6,26E+00		
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials												[MJ]	INA	INA	INA	INA		
Use of non-renewable primary energy resources used as raw materials												[MJ]	INA	INA	INA	INA		
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)												[MJ]	2,64E+02	9,58E-01	4,42E+00	2,69E+02		
Use of secondary material												[kg]	1,70E-01	1,09E-01	0,00E+00	2,79E-01		
Use of renewable secondary fuels												[MJ]	1,63E+00	4,79E-02	0,00E+00	1,68E+00		
Use of non-renewable secondary fuels												[MJ]	1,27E+00	0,00E+00	0,00E+00	1,27E+00		
Net use of fresh water												[dm ³]	INA	INA	INA	INA		
Other environmental information describing waste categories: 1 m ²																		
Indicator												Unit	A1	A2	A3	A1-A3		
Hazardous waste disposed												[kg]	2,40E-02	6,82E-08	1,72E-09	2,40E-02		
Non-hazardous waste disposed												[kg]	3,97E-01	6,34E-05	3,29E-06	3,97E-01		
Radioactive waste disposed												[kg]	1,64E-04	0,00E+00	0,00E+00	1,64E-04		
Components for re-use												[kg]	9,43E-05	0,00E+00	5,33E-05	1,48E-04		
Materials for recycling												[kg]	1,34E-01	0,00E+00	2,90E-05	1,34E-01		
Materials for energy recovery												[kg]	2,40E-06	0,00E+00	4,05E-07	2,80E-06		
Exported energy												[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00		

Table 3. Environmental characteristic for 1 m² of Atlas ROKER (mineral renders), 12 cm MW

Environmental assessment information (MND – Module not declared, MD – Module Declared)																	
Product stage			Construction process		Use stage							End of life			Benefits and loads beyond the system boundary		
Raw material supply	Transport	Manufacturing	Transport to construction site	Construction-installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse-recovery-recycling potential	
																	A1
MD	MD	MD	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Environmental impacts: 1 m²																	
Indicator	Unit		A1	A2	A3	A1-A3											
Global warming potential	[kg CO ₂ eq.]		3,46E+01	1,02E-01	3,66E-01	3,51E+01											
Depletion potential of the stratospheric ozone layer	[kg CFC 11 eq.]		9,25E-05	0,00E+00	0,00E+00	9,25E-05											
Acidification potential of soil and water	[kg SO ₂ eq.]		1,36E-01	7,63E-04	1,05E-04	1,36E-01											
Eutrophication potential	[kg (PO ₄) ³⁻ eq.]		5,34E-03	5,33E-05	8,45E-06	5,40E-03											
Formation potential of tropospheric ozone	[kg Ethene eq.]		1,62E-02	1,35E-04	6,02E-05	1,64E-02											
Abiotic depletion potential (ADP-elements) for non-fossil resources	[kg Sb eq.]		1,89E-01	0,00E+00	1,36E-06	1,89E-01											
Abiotic depletion potential (ADP-fossil fuels) for fossil resources	[MJ]		3,30E+02	9,13E-01	4,21E+00	3,35E+02											
Environmental aspects on resource use: 1 m²																	
Indicator	Unit		A1	A2	A3	A1-A3											
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	[MJ]		INA	INA	INA	INA											
Use of renewable primary energy resources used as raw materials	[MJ]		INA	INA	INA	INA											
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	[MJ]		6,09E+00	3,67E-02	1,28E-01	6,26E+00											
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	[MJ]		INA	INA	INA	INA											
Use of non-renewable primary energy resources used as raw materials	[MJ]		INA	INA	INA	INA											
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	[MJ]		3,63E+02	9,58E-01	4,42E+00	3,68E+02											
Use of secondary material	[kg]		1,70E-01	1,09E-01	0,00E+00	2,79E-01											
Use of renewable secondary fuels	[MJ]		1,63E+00	4,79E-02	0,00E+00	1,68E+00											
Use of non-renewable secondary fuels	[MJ]		1,27E+00	0,00E+00	0,00E+00	1,27E+00											
Net use of fresh water	[dm ³]		INA	INA	INA	INA											
Other environmental information describing waste categories: 1 m²																	
Indicator	Unit		A1	A2	A3	A1-A3											
Hazardous waste disposed	[kg]		2,40E-02	6,82E-08	1,72E-09	2,40E-02											
Non-hazardous waste disposed	[kg]		3,99E-01	6,34E-05	3,29E-06	3,99E-01											
Radioactive waste disposed	[kg]		1,64E-04	0,00E+00	0,00E+00	1,64E-04											
Components for re-use	[kg]		9,43E-05	0,00E+00	5,33E-05	1,48E-04											
Materials for recycling	[kg]		1,34E-01	0,00E+00	2,90E-05	1,34E-01											
Materials for energy recovery	[kg]		2,40E-06	0,00E+00	4,05E-07	2,80E-06											
Exported energy	[MJ]		0,00E+00	0,00E+00	0,00E+00	0,00E+00											



ENVIRONMENTAL PRODUCT DECLARATION

Table 4. Environmental characteristic for 1 m² of Atlas ROKER (mineral renders), 15 cm MW

Environmental assessment information (MND – Module not declared, MD – Module Declared)																		
Product stage			Construction process		Use stage							End of life			Benefits and loads beyond the system boundary			
Raw material supply	Transport	Manufacturing	Transport to construction site	Construction-installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse-recovery-recycling potential		
	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3		C4	D
	MD	MD	MD	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND		MND	MND
Environmental impacts: 1 m²																		
Indicator												Unit	A1	A2	A3	A1-A3		
Global warming potential												[kg CO ₂ eq.]	3,67E+01	1,02E-01	3,66E-01	3,72E+01		
Depletion potential of the stratospheric ozone layer												[kg CFC 11 eq.]	9,26E-05	0,00E+00	0,00E+00	9,26E-05		
Acidification potential of soil and water												[kg SO ₂ eq.]	1,44E-01	7,63E-04	1,05E-04	1,45E-01		
Eutrophication potential												[kg (PO ₄) ³⁻ eq.]	5,63E-03	5,33E-05	8,45E-06	5,69E-03		
Formation potential of tropospheric ozone												[kg Ethene eq.]	1,71E-02	1,35E-04	6,02E-05	1,73E-02		
Abiotic depletion potential (ADP-elements) for non-fossil resources												[kg Sb eq.]	2,01E-01	0,00E+00	1,36E-06	2,01E-01		
Abiotic depletion potential (ADP-fossil fuels) for fossil resources												[MJ]	3,52E+02	9,13E-01	4,21E+00	3,58E+02		
Environmental aspects on resource use: 1 m²																		
Indicator												Unit	A1	A2	A3	A1-A3		
Use of renewable primary energy excluding renewable primary energy resources used as raw materials												[MJ]	INA	INA	INA	INA		
Use of renewable primary energy resources used as raw materials												[MJ]	INA	INA	INA	INA		
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)												[MJ]	6,09E+00	3,67E-02	1,28E-01	6,26E+00		
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials												[MJ]	INA	INA	INA	INA		
Use of non-renewable primary energy resources used as raw materials												[MJ]	INA	INA	INA	INA		
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)												[MJ]	3,88E+02	9,58E-01	4,42E+00	3,93E+02		
Use of secondary material												[kg]	1,70E-01	1,09E-01	0,00E+00	2,79E-01		
Use of renewable secondary fuels												[MJ]	1,63E+00	4,79E-02	0,00E+00	1,68E+00		
Use of non-renewable secondary fuels												[MJ]	1,27E+00	0,00E+00	0,00E+00	1,27E+00		
Net use of fresh water												[dm ³]	INA	INA	INA	INA		
Other environmental information describing waste categories: 1 m²																		
Indicator												Unit	A1	A2	A3	A1-A3		
Hazardous waste disposed												[kg]	2,40E-02	6,82E-08	1,72E-09	2,40E-02		
Non-hazardous waste disposed												[kg]	4,00E-01	6,34E-05	3,29E-06	4,00E-01		
Radioactive waste disposed												[kg]	1,64E-04	0,00E+00	0,00E+00	1,64E-04		
Components for re-use												[kg]	9,43E-05	0,00E+00	5,33E-05	1,48E-04		
Materials for recycling												[kg]	1,34E-01	0,00E+00	2,90E-05	1,34E-01		
Materials for energy recovery												[kg]	2,40E-06	0,00E+00	4,05E-07	2,80E-06		
Exported energy												[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00		

Table 5. Environmental characteristic for 1 m² of Atlas ROKER (mineral renders), 20 cm MW

Environmental assessment information (MND – Module not declared, MD – Module Declared)																	
Product stage			Construction process		Use stage							End of life			Benefits and loads beyond the system boundary		
Raw material supply	Transport	Manufacturing	Transport to construction site	Construction-installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse-recovery-recycling potential	
																	A1
MD	MD	MD	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Environmental impacts: 1 m²																	
Indicator		Unit		A1	A2	A3	A1-A3										
Global warming potential		[kg CO ₂ eq.]		4,75E+01	1,02E-01	3,66E-01	4,79E+01										
Depletion potential of the stratospheric ozone layer		[kg CFC 11 eq.]		9,31E-05	0,00E+00	0,00E+00	9,31E-05										
Acidification potential of soil and water		[kg SO ₂ eq.]		1,86E-01	7,63E-04	1,05E-04	1,87E-01										
Eutrophication potential		[kg (PO ₄) ³⁻ eq.]		7,10E-03	5,33E-05	8,45E-06	7,16E-03										
Formation potential of tropospheric ozone		[kg Ethene eq.]		2,17E-02	1,35E-04	6,02E-05	2,19E-02										
Abiotic depletion potential (ADP-elements) for non-fossil resources		[kg Sb eq.]		2,64E-01	0,00E+00	1,36E-06	2,64E-01										
Abiotic depletion potential (ADP-fossil fuels) for fossil resources		[MJ]		4,65E+02	9,13E-01	4,21E+00	4,70E+02										
Environmental aspects on resource use: 1 m²																	
Indicator		Unit		A1	A2	A3	A1-A3										
Use of renewable primary energy excluding renewable primary energy resources used as raw materials		[MJ]		0,00	INA	INA	INA										
Use of renewable primary energy resources used as raw materials		[MJ]		INA	INA	INA	INA										
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)		[MJ]		6,09E+00	3,67E-02	1,28E-01	6,26E+00										
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials		[MJ]		INA	INA	INA	INA										
Use of non-renewable primary energy resources used as raw materials		[MJ]		INA	INA	INA	INA										
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)		[MJ]		5,12E+02	9,58E-01	4,42E+00	5,17E+02										
Use of secondary material		[kg]		1,70E-01	1,09E-01	0,00E+00	2,79E-01										
Use of renewable secondary fuels		[MJ]		1,63E+00	4,79E-02	0,00E+00	1,68E+00										
Use of non-renewable secondary fuels		[MJ]		1,27E+00	0,00E+00	0,00E+00	1,27E+00										
Net use of fresh water		[dm ³]		INA	INA	INA	INA										
Other environmental information describing waste categories: 1 m²																	
Indicator		Unit		A1	A2	A3	A1-A3										
Hazardous waste disposed		[kg]		2,40E-02	6,82E-08	1,72E-09	2,40E-02										
Non-hazardous waste disposed		[kg]		4,02E-01	6,34E-05	3,29E-06	4,02E-01										
Radioactive waste disposed		[kg]		1,64E-04	0,00E+00	0,00E+00	1,64E-04										
Components for re-use		[kg]		9,43E-05	0,00E+00	5,33E-05	1,48E-04										
Materials for recycling		[kg]		1,34E-01	0,00E+00	2,90E-05	1,34E-01										
Materials for energy recovery		[kg]		2,40E-06	0,00E+00	4,05E-07	2,80E-06										
Exported energy		[MJ]		0,00E+00	0,00E+00	0,00E+00	0,00E+00										



ENVIRONMENTAL PRODUCT DECLARATION

Table 6. Environmental characteristic for 1 m² of Atlas ROKER (mineral renders), 25 cm MW

Environmental assessment information (MND – Module not declared, MD – Module Declared)																		
Product stage			Construction process		Use stage							End of life			Benefits and loads beyond the system boundary			
Raw material supply	Transport	Manufacturing	Transport to construction site	Construction-installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse-recovery-recycling potential		
	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3		C4	D
	MD	MD	MD	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND		MND	MND
Environmental impacts: 1 m²																		
Indicator												Unit	A1	A2	A3	A1-A3		
Global warming potential												[kg CO ₂ eq.]	5,82E+01	1,02E-01	3,66E-01	5,87E+01		
Depletion potential of the stratospheric ozone layer												[kg CFC 11 eq.]	9,35E-05	0,00E+00	0,00E+00	9,35E-05		
Acidification potential of soil and water												[kg SO ₂ eq.]	2,29E-01	7,63E-04	1,05E-04	2,29E-01		
Eutrophication potential												[kg (PO ₄) ³⁻ eq.]	8,57E-03	5,33E-05	8,45E-06	8,63E-03		
Formation potential of tropospheric ozone												[kg Ethene eq.]	2,62E-02	1,35E-04	6,02E-05	2,64E-02		
Abiotic depletion potential (ADP-elements) for non-fossil resources												[kg Sb eq.]	3,27E-01	0,00E+00	1,36E-06	3,27E-01		
Abiotic depletion potential (ADP-fossil fuels) for fossil resources												[MJ]	5,78E+02	9,13E-01	4,21E+00	5,83E+02		
Environmental aspects on resource use: 1 m²																		
Indicator												Unit	A1	A2	A3	A1-A3		
Use of renewable primary energy excluding renewable primary energy resources used as raw materials												[MJ]	INA	INA	INA	INA		
Use of renewable primary energy resources used as raw materials												[MJ]	INA	INA	INA	INA		
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)												[MJ]	6,09E+00	3,67E-02	1,28E-01	6,26E+00		
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials												[MJ]	INA	INA	INA	INA		
Use of non-renewable primary energy resources used as raw materials												[MJ]	INA	INA	INA	INA		
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)												[MJ]	6,36E+02	9,58E-01	4,42E+00	6,41E+02		
Use of secondary material												[kg]	1,70E-01	1,09E-01	0,00E+00	2,79E-01		
Use of renewable secondary fuels												[MJ]	1,63E+00	4,79E-02	0,00E+00	1,68E+00		
Use of non-renewable secondary fuels												[MJ]	1,27E+00	0,00E+00	0,00E+00	1,27E+00		
Net use of fresh water												[dm ³]	INA	INA	INA	INA		
Other environmental information describing waste categories: 1 m²																		
Indicator												Unit	A1	A2	A3	A1-A3		
Hazardous waste disposed												[kg]	2,40E-02	6,82E-08	1,72E-09	2,40E-02		
Non-hazardous waste disposed												[kg]	4,05E-01	6,34E-05	3,29E-06	4,05E-01		
Radioactive waste disposed												[kg]	1,64E-04	0,00E+00	0,00E+00	1,64E-04		
Components for re-use												[kg]	9,43E-05	0,00E+00	5,33E-05	1,48E-04		
Materials for recycling												[kg]	1,34E-01	0,00E+00	2,90E-05	1,34E-01		
Materials for energy recovery												[kg]	2,40E-06	0,00E+00	4,05E-07	2,80E-06		
Exported energy												[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00		

Table 7. Environmental characteristic for 1 m² of Atlas ROKER (silicone render), 10 cm MW

Environmental assessment information (MND – Module not declared, MD – Module Declared)																	
Product stage			Construction process		Use stage							End of life			Benefits and loads beyond the system boundary		
Raw material supply	Transport	Manufacturing	Transport to construction site	Construction-installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse-recovery-recycling potential	
																	A1
MD	MD	MD	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Environmental impacts: 1 m²																	
Indicator										Unit	A1	A2	A3	A1-A3			
Global warming potential										[kg CO ₂ eq.]	2,67E+01	1,14E-01	3,66E-01	2,72E+01			
Depletion potential of the stratospheric ozone layer										[kg CFC 11 eq.]	9,21E-05	0,00E+00	0,00E+00	9,21E-05			
Acidification potential of soil and water										[kg SO ₂ eq.]	1,06E-01	8,56E-04	1,05E-04	1,07E-01			
Eutrophication potential										[kg (PO ₄) ³⁻ eq.]	4,46E-03	5,98E-05	8,45E-06	4,52E-03			
Formation potential of tropospheric ozone										[kg Ethene eq.]	1,31E-02	1,51E-04	6,02E-05	1,33E-02			
Abiotic depletion potential (ADP-elements) for non-fossil resources										[kg Sb eq.]	1,43E-01	0,00E+00	1,36E-06	1,43E-01			
Abiotic depletion potential (ADP-fossil fuels) for fossil resources										[MJ]	2,60E+02	9,89E-01	4,21E+00	2,65E+02			
Environmental aspects on resource use: 1 m²																	
Indicator										Unit	A1	A2	A3	A1-A3			
Use of renewable primary energy excluding renewable primary energy resources used as raw materials										[MJ]	INA	INA	INA	INA			
Use of renewable primary energy resources used as raw materials										[MJ]	INA	INA	INA	INA			
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)										[MJ]	8,59E+00	6,65E-02	1,28E-01	8,79E+00			
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials										[MJ]	INA	INA	INA	INA			
Use of non-renewable primary energy resources used as raw materials										[MJ]	INA	INA	INA	INA			
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)										[MJ]	2,86E+02	1,04E+00	4,42E+00	2,91E+02			
Use of secondary material										[kg]	1,60E-01	1,09E-01	0,00E+00	2,69E-01			
Use of renewable secondary fuels										[MJ]	1,46E+00	5,19E-02	0,00E+00	1,52E+00			
Use of non-renewable secondary fuels										[MJ]	1,22E+00	0,00E+00	0,00E+00	1,22E+00			
Net use of fresh water										[dm ³]	INA	INA	INA	INA			
Other environmental information describing waste categories: 1 m²																	
Indicator										Unit	A1	A2	A3	A1-A3			
Hazardous waste disposed										[kg]	7,19E-02	1,31E-08	1,72E-09	7,19E-02			
Non-hazardous waste disposed										[kg]	1,08E+00	1,22E-05	3,29E-06	1,08E+00			
Radioactive waste disposed										[kg]	6,17E-04	0,00E+00	0,00E+00	6,17E-04			
Components for re-use										[kg]	9,43E-05	0,00E+00	5,33E-05	1,48E-04			
Materials for recycling										[kg]	4,06E-01	0,00E+00	2,90E-05	4,06E-01			
Materials for energy recovery										[kg]	2,40E-06	0,00E+00	4,05E-07	2,80E-06			
Exported energy										[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00			



ENVIRONMENTAL PRODUCT DECLARATION

Table 8. Environmental characteristic for 1 m² of Atlas ROKER (silicone render), 12 cm MW

Environmental assessment information (MND – Module not declared, MD – Module Declared)																		
Product stage			Construction process		Use stage							End of life			Benefits and loads beyond the system boundary			
Raw material supply	Transport	Manufacturing	Transport to construction site	Construction-installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse-recovery-recycling potential		
	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3		C4	D
	MD	MD	MD	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND		MND	MND
Environmental impacts: 1 m²																		
Indicator	Unit		A1	A2	A3	A1-A3												
Global warming potential	[kg CO ₂ eq.]		3,10E+01	1,14E-01	3,66E-01	3,15E+01												
Depletion potential of the stratospheric ozone layer	[kg CFC 11 eq.]		9,23E-05	0,00E+00	0,00E+00	9,23E-05												
Acidification potential of soil and water	[kg SO ₂ eq.]		1,23E-01	8,56E-04	1,05E-04	1,24E-01												
Eutrophication potential	[kg (PO ₄) ³⁻ eq.]		5,04E-03	5,98E-05	8,45E-06	5,11E-03												
Formation potential of tropospheric ozone	[kg Ethene eq.]		1,49E-02	1,51E-04	6,02E-05	1,51E-02												
Abiotic depletion potential (ADP-elements) for non-fossil resources	[kg Sb eq.]		1,68E-01	0,00E+00	1,36E-06	1,68E-01												
Abiotic depletion potential (ADP-fossil fuels) for fossil resources	[MJ]		3,05E+02	9,89E-01	4,21E+00	3,10E+02												
Environmental aspects on resource use: 1 m²																		
Indicator	Unit		A1	A2	A3	A1-A3												
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	[MJ]		INA	INA	INA	INA												
Use of renewable primary energy resources used as raw materials	[MJ]		INA	INA	INA	INA												
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	[MJ]		8,59E+00	6,65E-02	1,28E-01	8,79E+00												
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	[MJ]		INA	INA	INA	INA												
Use of non-renewable primary energy resources used as raw materials	[MJ]		INA	INA	INA	INA												
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	[MJ]		3,35E+02	1,04E+00	4,42E+00	3,41E+02												
Use of secondary material	[kg]		1,60E-01	1,09E-01	0,00E+00	2,69E-01												
Use of renewable secondary fuels	[MJ]		1,46E+00	5,19E-02	0,00E+00	1,52E+00												
Use of non-renewable secondary fuels	[MJ]		1,22E+00	0,00E+00	0,00E+00	1,22E+00												
Net use of fresh water	[dm ³]		INA	INA	INA	INA												
Other environmental information describing waste categories: 1 m²																		
Indicator	Unit		A1	A2	A3	A1-A3												
Hazardous waste disposed	[kg]		7,19E-02	1,31E-08	1,72E-09	7,19E-02												
Non-hazardous waste disposed	[kg]		1,09E+00	1,22E-05	3,29E-06	1,09E+00												
Radioactive waste disposed	[kg]		6,17E-04	0,00E+00	0,00E+00	6,17E-04												
Components for re-use	[kg]		9,43E-05	0,00E+00	5,33E-05	1,48E-04												
Materials for recycling	[kg]		4,06E-01	0,00E+00	2,90E-05	4,06E-01												
Materials for energy recovery	[kg]		2,40E-06	0,00E+00	4,05E-07	2,80E-06												
Exported energy	[MJ]		0,00E+00	0,00E+00	0,00E+00	0,00E+00												

Table 9. Environmental characteristic for 1 m² of Atlas ROKER (silicone render), 15 cm MW

Environmental assessment information (MND – Module not declared, MD – Module Declared)																	
Product stage			Construction process		Use stage							End of life			Benefits and loads beyond the system boundary		
Raw material supply	Transport	Manufacturing	Transport to construction site	Construction-installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse-recovery-recycling potential	
																	A1
MD	MD	MD	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Environmental impacts: 1 m²																	
Indicator										Unit	A1	A2	A3	A1-A3			
Global warming potential										[kg CO ₂ eq.]	3,74E+01	1,14E-01	3,66E-01	3,79E+01			
Depletion potential of the stratospheric ozone layer										[kg CFC 11 eq.]	9,26E-05	0,00E+00	0,00E+00	9,26E-05			
Acidification potential of soil and water										[kg SO ₂ eq.]	1,49E-01	8,56E-04	1,05E-04	1,50E-01			
Eutrophication potential										[kg (PO ₄) ³⁻ eq.]	5,93E-03	5,98E-05	8,45E-06	5,99E-03			
Formation potential of tropospheric ozone										[kg Ethene eq.]	1,77E-02	1,51E-04	6,02E-05	1,79E-02			
Abiotic depletion potential (ADP-elements) for non-fossil resources										[kg Sb eq.]	2,06E-01	0,00E+00	1,36E-06	2,06E-01			
Abiotic depletion potential (ADP-fossil fuels) for fossil resources										[MJ]	3,73E+02	9,89E-01	4,21E+00	3,78E+02			
Environmental aspects on resource use: 1 m²																	
Indicator										Unit	A1	A2	A3	A1-A3			
Use of renewable primary energy excluding renewable primary energy resources used as raw materials										[MJ]	INA	INA	INA	INA			
Use of renewable primary energy resources used as raw materials										[MJ]	INA	INA	INA	INA			
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)										[MJ]	8,59E+00	6,65E-02	1,28E-01	8,79E+00			
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials										[MJ]	INA	INA	INA	INA			
Use of non-renewable primary energy resources used as raw materials										[MJ]	INA	INA	INA	INA			
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)										[MJ]	4,10E+02	1,04E+00	4,42E+00	4,15E+02			
Use of secondary material										[kg]	1,60E-01	1,09E-01	0,00E+00	2,69E-01			
Use of renewable secondary fuels										[MJ]	1,46E+00	5,19E-02	0,00E+00	1,52E+00			
Use of non-renewable secondary fuels										[MJ]	1,22E+00	0,00E+00	0,00E+00	1,22E+00			
Net use of fresh water										[dm ³]	INA	INA	INA	INA			
Other environmental information describing waste categories: 1 m²																	
Indicator										Unit	A1	A2	A3	A1-A3			
Hazardous waste disposed										[kg]	7,19E-02	1,31E-08	1,72E-09	7,19E-02			
Non-hazardous waste disposed										[kg]	1,09E+00	1,22E-05	3,29E-06	1,09E+00			
Radioactive waste disposed										[kg]	6,17E-04	0,00E+00	0,00E+00	6,17E-04			
Components for re-use										[kg]	9,43E-05	0,00E+00	5,33E-05	1,48E-04			
Materials for recycling										[kg]	4,06E-01	0,00E+00	2,90E-05	4,06E-01			
Materials for energy recovery										[kg]	2,40E-06	0,00E+00	4,05E-07	2,80E-06			
Exported energy										[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00			



ENVIRONMENTAL PRODUCT DECLARATION

Table 10. Environmental characteristic for 1 m² of Atlas ROKER (silicone render), 20 cm MW

Environmental assessment information (MND – Module not declared, MD – Module Declared)																		
Product stage			Construction process		Use stage							End of life			Benefits and loads beyond the system boundary			
Raw material supply	Transport	Manufacturing	Transport to construction site	Construction-installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse-recovery-recycling potential		
	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3		C4	D
	MD	MD	MD	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND		MND	MND
Environmental impacts: 1 m²																		
Indicator	Unit		A1	A2	A3	A1-A3												
Global warming potential	[kg CO ₂ eq.]		4,82E+01	1,14E-01	3,66E-01	4,87E+01												
Depletion potential of the stratospheric ozone layer	[kg CFC 11 eq.]		9,31E-05	0,00E+00	0,00E+00	9,31E-05												
Acidification potential of soil and water	[kg SO ₂ eq.]		1,91E-01	8,56E-04	1,05E-04	1,92E-01												
Eutrophication potential	[kg (PO ₄) ³⁻ eq.]		7,40E-03	5,98E-05	8,45E-06	7,46E-03												
Formation potential of tropospheric ozone	[kg Ethene eq.]		2,22E-02	1,51E-04	6,02E-05	2,24E-02												
Abiotic depletion potential (ADP-elements) for non-fossil resources	[kg Sb eq.]		2,69E-01	0,00E+00	1,36E-06	2,69E-01												
Abiotic depletion potential (ADP-fossil fuels) for fossil resources	[MJ]		4,85E+02	9,89E-01	4,21E+00	4,91E+02												
Environmental aspects on resource use: 1 m²																		
Indicator	Unit		A1	A2	A3	A1-A3												
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	[MJ]		INA	INA	INA	INA												
Use of renewable primary energy resources used as raw materials	[MJ]		INA	INA	INA	INA												
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	[MJ]		8,59E+00	6,65E-02	1,28E-01	8,79E+00												
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	[MJ]		INA	INA	INA	INA												
Use of non-renewable primary energy resources used as raw materials	[MJ]		INA	INA	INA	INA												
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	[MJ]		5,34E+02	1,04E+00	4,42E+00	5,39E+02												
Use of secondary material	[kg]		1,60E-01	1,09E-01	0,00E+00	2,69E-01												
Use of renewable secondary fuels	[MJ]		1,46E+00	5,19E-02	0,00E+00	1,52E+00												
Use of non-renewable secondary fuels	[MJ]		1,22E+00	0,00E+00	0,00E+00	1,22E+00												
Net use of fresh water	[dm ³]		INA	INA	INA	INA												
Other environmental information describing waste categories: 1 m²																		
Indicator	Unit		A1	A2	A3	A1-A3												
Hazardous waste disposed	[kg]		7,19E-02	1,31E-08	1,72E-09	7,19E-02												
Non-hazardous waste disposed	[kg]		1,09E+00	1,22E-05	3,29E-06	1,09E+00												
Radioactive waste disposed	[kg]		6,17E-04	0,00E+00	0,00E+00	6,17E-04												
Components for re-use	[kg]		9,43E-05	0,00E+00	5,33E-05	1,48E-04												
Materials for recycling	[kg]		4,06E-01	0,00E+00	2,90E-05	4,06E-01												
Materials for energy recovery	[kg]		2,40E-06	0,00E+00	4,05E-07	2,80E-06												
Exported energy	[MJ]		0,00E+00	0,00E+00	0,00E+00	0,00E+00												

Table 11. Environmental characteristic for 1 m² of Atlas ROKER (silicone render), 25 cm MW

Environmental assessment information (MND – Module not declared, MD – Module Declared)																	
Product stage			Construction process		Use stage							End of life			Benefits and loads beyond the system boundary		
Raw material supply	Transport	Manufacturing	Transport to construction site	Construction-installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse-recovery-recycling potential	
	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3		C4
MD	MD	MD	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Environmental impacts: 1 m²																	
Indicator												Unit	A1	A2	A3	A1-A3	
Global warming potential												[kg CO ₂ eq.]	5,89E+01	1,14E-01	3,66E-01	5,94E+01	
Depletion potential of the stratospheric ozone layer												[kg CFC 11 eq.]	9,36E-05	0,00E+00	0,00E+00	9,36E-05	
Acidification potential of soil and water												[kg SO ₂ eq.]	2,33E-01	8,56E-04	1,05E-04	2,34E-01	
Eutrophication potential												[kg (PO ₄) ³⁻ eq.]	8,87E-03	5,98E-05	8,45E-06	8,93E-03	
Formation potential of tropospheric ozone												[kg Ethene eq.]	2,68E-02	1,51E-04	6,02E-05	2,70E-02	
Abiotic depletion potential (ADP-elements) for non-fossil resources												[kg Sb eq.]	3,32E-01	0,00E+00	1,36E-06	3,32E-01	
Abiotic depletion potential (ADP-fossil fuels) for fossil resources												[MJ]	5,98E+02	9,89E-01	4,21E+00	6,03E+02	
Environmental aspects on resource use: 1 m²																	
Indicator												Unit	A1	A2	A3	A1-A3	
Use of renewable primary energy excluding renewable primary energy resources used as raw materials												[MJ]	INA	INA	INA	INA	
Use of renewable primary energy resources used as raw materials												[MJ]	INA	INA	INA	INA	
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)												[MJ]	8,59E+00	6,65E-02	1,28E-01	8,79E+00	
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials												[MJ]	INA	INA	INA	INA	
Use of non-renewable primary energy resources used as raw materials												[MJ]	INA	INA	INA	INA	
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)												[MJ]	6,58E+02	1,04E+00	4,42E+00	6,63E+02	
Use of secondary material												[kg]	1,60E-01	1,09E-01	0,00E+00	2,69E-01	
Use of renewable secondary fuels												[MJ]	1,46E+00	5,19E-02	0,00E+00	1,52E+00	
Use of non-renewable secondary fuels												[MJ]	1,22E+00	0,00E+00	0,00E+00	1,22E+00	
Net use of fresh water												[dm ³]	INA	INA	INA	INA	
Other environmental information describing waste categories: 1 m²																	
Indicator												Unit	A1	A2	A3	A1-A3	
Hazardous waste disposed												[kg]	7,19E-02	1,31E-08	1,72E-09	7,19E-02	
Non-hazardous waste disposed												[kg]	1,09E+00	1,22E-05	3,29E-06	1,09E+00	
Radioactive waste disposed												[kg]	6,17E-04	0,00E+00	0,00E+00	6,17E-04	
Components for re-use												[kg]	9,43E-05	0,00E+00	5,33E-05	1,48E-04	
Materials for recycling												[kg]	4,06E-01	0,00E+00	2,90E-05	4,06E-01	
Materials for energy recovery												[kg]	2,40E-06	0,00E+00	4,05E-07	2,80E-06	
Exported energy												[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	



ENVIRONMENTAL PRODUCT DECLARATION

Table 12. Environmental characteristic for 1 m² of Atlas ROKER (silicone-silicate render), 10 cm MW

Environmental assessment information (MND – Module not declared, MD – Module Declared)																					
Product stage			Construction process		Use stage						End of life				Benefits and loads beyond the system boundary						
Raw material supply	Transport	Manufacturing	Transport to construction site	Construction-installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse-recovery-recycling potential					
	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3		C4	D			
	MD	MD	MD	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND		MND	MND			
Environmental impacts: 1 m²																					
Indicator																	Unit	A1	A2	A3	A1-A3
Global warming potential																	[kg CO ₂ eq.]	2,78E+01	1,23E-01	3,66E-01	2,83E+01
Depletion potential of the stratospheric ozone layer																	[kg CFC 11 eq.]	9,28E-05	0,00E+00	0,00E+00	9,28E-05
Acidification potential of soil and water																	[kg SO ₂ eq.]	1,10E-01	9,10E-04	1,05E-04	1,11E-01
Eutrophication potential																	[kg (PO ₄) ³⁻ eq.]	4,62E-03	6,47E-05	8,45E-06	4,69E-03
Formation potential of tropospheric ozone																	[kg Ethene eq.]	1,47E-02	1,61E-04	6,02E-05	1,50E-02
Abiotic depletion potential (ADP-elements) for non-fossil resources																	[kg Sb eq.]	1,50E-01	0,00E+00	1,36E-06	1,50E-01
Abiotic depletion potential (ADP-fossil fuels) for fossil resources																	[MJ]	2,55E+02	9,87E-01	4,21E+00	2,60E+02
Environmental aspects on resource use: 1 m²																					
Indicator																	Unit	A1	A2	A3	A1-A3
Use of renewable primary energy excluding renewable primary energy resources used as raw materials																	[MJ]	INA	INA	INA	INA
Use of renewable primary energy resources used as raw materials																	[MJ]	INA	INA	INA	INA
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)																	[MJ]	5,47E+00	6,64E-02	1,28E-01	5,67E+00
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials																	[MJ]	INA	INA	INA	INA
Use of non-renewable primary energy resources used as raw materials																	[MJ]	INA	INA	INA	INA
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)																	[MJ]	2,80E+02	1,04E+00	4,42E+00	2,86E+02
Use of secondary material																	[kg]	1,60E-01	1,09E-01	0,00E+00	2,69E-01
Use of renewable secondary fuels																	[MJ]	1,46E+00	5,18E-02	0,00E+00	1,52E+00
Use of non-renewable secondary fuels																	[MJ]	1,14E+00	0,00E+00	0,00E+00	1,14E+00
Net use of fresh water																	[dm ³]	INA	INA	INA	INA
Other environmental information describing waste categories: 1 m²																					
Indicator																	Unit	A1	A2	A3	A1-A3
Hazardous waste disposed																	[kg]	5,08E-02	5,27E-08	1,72E-09	5,08E-02
Non-hazardous waste disposed																	[kg]	7,44E-01	4,90E-05	3,29E-06	7,44E-01
Radioactive waste disposed																	[kg]	1,63E-04	0,00E+00	0,00E+00	1,63E-04
Components for re-use																	[kg]	9,43E-05	0,00E+00	5,33E-05	1,48E-04
Materials for recycling																	[kg]	2,87E-01	0,00E+00	2,90E-05	2,87E-01
Materials for energy recovery																	[kg]	2,40E-06	0,00E+00	4,05E-07	2,80E-06
Exported energy																	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table 13. Environmental characteristic for 1 m² of Atlas ROKER (silicone-silicate render), 12 cm MW

Environmental assessment information (MND – Module not declared, MD – Module Declared)																	
Product stage			Construction process		Use stage							End of life			Benefits and loads beyond the system boundary		
Raw material supply	Transport	Manufacturing	Transport to construction site	Construction-installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse-recovery-recycling potential	
																	A1
MD	MD	MD	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Environmental impacts: 1 m²																	
Indicator	Unit		A1	A2	A3	A1-A3											
Global warming potential	[kg CO ₂ eq.]		3,21E+01	1,23E-01	3,66E-01	3,26E+01											
Depletion potential of the stratospheric ozone layer	[kg CFC 11 eq.]		9,29E-05	0,00E+00	0,00E+00	9,29E-05											
Acidification potential of soil and water	[kg SO ₂ eq.]		1,27E-01	9,10E-04	1,05E-04	1,28E-01											
Eutrophication potential	[kg (PO ₄) ³⁻ eq.]		5,21E-03	6,47E-05	8,45E-06	5,28E-03											
Formation potential of tropospheric ozone	[kg Ethene eq.]		1,66E-02	1,61E-04	6,02E-05	1,68E-02											
Abiotic depletion potential (ADP-elements) for non-fossil resources	[kg Sb eq.]		1,75E-01	0,00E+00	1,36E-06	1,75E-01											
Abiotic depletion potential (ADP-fossil fuels) for fossil resources	[MJ]		3,00E+02	9,87E-01	4,21E+00	3,05E+02											
Environmental aspects on resource use: 1 m²																	
Indicator	Unit		A1	A2	A3	A1-A3											
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	[MJ]		INA	INA	INA	INA											
Use of renewable primary energy resources used as raw materials	[MJ]		INA	INA	INA	INA											
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	[MJ]		5,47E+00	6,64E-02	1,28E-01	5,67E+00											
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	[MJ]		INA	INA	INA	INA											
Use of non-renewable primary energy resources used as raw materials	[MJ]		INA	INA	INA	INA											
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	[MJ]		3,30E+02	1,04E+00	4,42E+00	3,36E+02											
Use of secondary material	[kg]		1,60E-01	1,09E-01	0,00E+00	2,69E-01											
Use of renewable secondary fuels	[MJ]		1,46E+00	5,18E-02	0,00E+00	1,52E+00											
Use of non-renewable secondary fuels	[MJ]		1,14E+00	0,00E+00	0,00E+00	1,14E+00											
Net use of fresh water	[dm ³]		INA	INA	INA	INA											
Other environmental information describing waste categories: 1 m²																	
Indicator	Unit		A1	A2	A3	A1-A3											
Hazardous waste disposed	[kg]		5,08E-02	5,27E-08	1,72E-09	5,08E-02											
Non-hazardous waste disposed	[kg]		7,45E-01	4,90E-05	3,29E-06	7,45E-01											
Radioactive waste disposed	[kg]		1,63E-04	0,00E+00	0,00E+00	1,63E-04											
Components for re-use	[kg]		9,43E-05	0,00E+00	5,33E-05	1,48E-04											
Materials for recycling	[kg]		2,87E-01	0,00E+00	2,90E-05	2,87E-01											
Materials for energy recovery	[kg]		2,40E-06	0,00E+00	4,05E-07	2,80E-06											
Exported energy	[MJ]		0,00E+00	0,00E+00	0,00E+00	0,00E+00											



ENVIRONMENTAL PRODUCT DECLARATION

Table 14. Environmental characteristic for 1 m² of Atlas ROKER (silicone-silicate render), 15 cm MW

Environmental assessment information (MND – Module not declared, MD – Module Declared)																		
Product stage			Construction process		Use stage							End of life			Benefits and loads beyond the system boundary			
Raw material supply	Transport	Manufacturing	Transport to construction site	Construction-installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse-recovery-recycling potential		
	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3		C4	D
	MD	MD	MD	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND		MND	MND
Environmental impacts: 1 m²																		
Indicator	Unit		A1	A2	A3	A1-A3												
Global warming potential	[kg CO ₂ eq.]		3,85E+01	1,23E-01	3,66E-01	3,90E+01												
Depletion potential of the stratospheric ozone layer	[kg CFC 11 eq.]		9,32E-05	0,00E+00	0,00E+00	9,32E-05												
Acidification potential of soil and water	[kg SO ₂ eq.]		1,53E-01	9,10E-04	1,05E-04	1,54E-01												
Eutrophication potential	[kg (PO ₄) ³⁻ eq.]		6,09E-03	6,47E-05	8,45E-06	6,16E-03												
Formation potential of tropospheric ozone	[kg Ethene eq.]		1,93E-02	1,61E-04	6,02E-05	1,95E-02												
Abiotic depletion potential (ADP-elements) for non-fossil resources	[kg Sb eq.]		2,13E-01	0,00E+00	1,36E-06	2,13E-01												
Abiotic depletion potential (ADP-fossil fuels) for fossil resources	[MJ]		3,68E+02	9,87E-01	4,21E+00	3,73E+02												
Environmental aspects on resource use: 1 m²																		
Indicator	Unit		A1	A2	A3	A1-A3												
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	[MJ]		INA	INA	INA	INA												
Use of renewable primary energy resources used as raw materials	[MJ]		INA	INA	INA	INA												
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	[MJ]		5,47E+00	6,64E-02	1,28E-01	5,67E+00												
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	[MJ]		INA	INA	INA	INA												
Use of non-renewable primary energy resources used as raw materials	[MJ]		INA	INA	INA	INA												
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	[MJ]		4,05E+02	1,04E+00	4,42E+00	4,10E+02												
Use of secondary material	[kg]		1,60E-01	1,09E-01	0,00E+00	2,69E-01												
Use of renewable secondary fuels	[MJ]		1,46E+00	5,18E-02	0,00E+00	1,52E+00												
Use of non-renewable secondary fuels	[MJ]		1,14E+00	0,00E+00	0,00E+00	1,14E+00												
Net use of fresh water	[dm ³]		INA	INA	INA	INA												
Other environmental information describing waste categories: 1 m²																		
Indicator	Unit		A1	A2	A3	A1-A3												
Hazardous waste disposed	[kg]		5,08E-02	5,27E-08	1,72E-09	5,08E-02												
Non-hazardous waste disposed	[kg]		7,47E-01	4,90E-05	3,29E-06	7,47E-01												
Radioactive waste disposed	[kg]		1,63E-04	0,00E+00	0,00E+00	1,63E-04												
Components for re-use	[kg]		9,43E-05	0,00E+00	5,33E-05	1,48E-04												
Materials for recycling	[kg]		2,87E-01	0,00E+00	2,90E-05	2,87E-01												
Materials for energy recovery	[kg]		2,40E-06	0,00E+00	4,05E-07	2,80E-06												
Exported energy	[MJ]		0,00E+00	0,00E+00	0,00E+00	0,00E+00												

Table 15. Environmental characteristic for 1 m² of Atlas ROKER (silicone-silicate render), 20 cm MW

Environmental assessment information (MND – Module not declared, MD – Module Declared)																	
Product stage			Construction process		Use stage							End of life			Benefits and loads beyond the system boundary		
Raw material supply	Transport	Manufacturing	Transport to construction site	Construction-installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse-recovery-recycling potential	
																	A1
MD	MD	MD	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Environmental impacts: 1 m²																	
Indicator												Unit	A1	A2	A3	A1-A3	
Global warming potential												[kg CO ₂ eq.]	4,93E+01	1,23E-01	3,66E-01	4,98E+01	
Depletion potential of the stratospheric ozone layer												[kg CFC 11 eq.]	9,37E-05	0,00E+00	0,00E+00	9,37E-05	
Acidification potential of soil and water												[kg SO ₂ eq.]	1,95E-01	9,10E-04	1,05E-04	1,96E-01	
Eutrophication potential												[kg (PO ₄) ³⁻ eq.]	7,56E-03	6,47E-05	8,45E-06	7,63E-03	
Formation potential of tropospheric ozone												[kg Ethene eq.]	2,38E-02	1,61E-04	6,02E-05	2,41E-02	
Abiotic depletion potential (ADP-elements) for non-fossil resources												[kg Sb eq.]	2,76E-01	0,00E+00	1,36E-06	2,76E-01	
Abiotic depletion potential (ADP-fossil fuels) for fossil resources												[MJ]	4,81E+02	9,87E-01	4,21E+00	4,86E+02	
Environmental aspects on resource use: 1 m²																	
Indicator												Unit	A1	A2	A3	A1-A3	
Use of renewable primary energy excluding renewable primary energy resources used as raw materials												[MJ]	INA	INA	INA	INA	
Use of renewable primary energy resources used as raw materials												[MJ]	INA	INA	INA	INA	
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)												[MJ]	5,47E+00	6,64E-02	1,28E-01	5,67E+00	
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials												[MJ]	INA	INA	INA	INA	
Use of non-renewable primary energy resources used as raw materials												[MJ]	INA	INA	INA	INA	
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)												[MJ]	5,29E+02	1,04E+00	4,42E+00	5,34E+02	
Use of secondary material												[kg]	1,60E-01	1,09E-01	0,00E+00	2,69E-01	
Use of renewable secondary fuels												[MJ]	1,46E+00	5,18E-02	0,00E+00	1,52E+00	
Use of non-renewable secondary fuels												[MJ]	1,14E+00	0,00E+00	0,00E+00	1,14E+00	
Net use of fresh water												[dm ³]	INA	INA	INA	INA	
Other environmental information describing waste categories: 1 m²																	
Indicator												Unit	A1	A2	A3	A1-A3	
Hazardous waste disposed												[kg]	5,08E-02	5,27E-08	1,72E-09	5,08E-02	
Non-hazardous waste disposed												[kg]	7,49E-01	4,90E-05	3,29E-06	7,50E-01	
Radioactive waste disposed												[kg]	1,63E-04	0,00E+00	0,00E+00	1,63E-04	
Components for re-use												[kg]	9,43E-05	0,00E+00	5,33E-05	1,48E-04	
Materials for recycling												[kg]	2,87E-01	0,00E+00	2,90E-05	2,87E-01	
Materials for energy recovery												[kg]	2,40E-06	0,00E+00	4,05E-07	2,80E-06	
Exported energy												[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	



ENVIRONMENTAL PRODUCT DECLARATION

Table 16. Environmental characteristic for 1 m² of Atlas ROKER (silicone-silicate render), 25 cm MW

Environmental assessment information (MND – Module not declared, MD – Module Declared)																		
Product stage			Construction process		Use stage							End of life			Benefits and loads beyond the system boundary			
Raw material supply	Transport	Manufacturing	Transport to construction site	Construction-installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse-recovery-recycling potential		
	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3		C4	D
	MD	MD	MD	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND		MND	MND
Environmental impacts: 1 m²																		
Indicator												Unit	A1	A2	A3	A1-A3		
Global warming potential												[kg CO ₂ eq.]	6,00E+01	1,23E-01	3,66E-01	6,05E+01		
Depletion potential of the stratospheric ozone layer												[kg CFC 11 eq.]	9,42E-05	0,00E+00	0,00E+00	9,42E-05		
Acidification potential of soil and water												[kg SO ₂ eq.]	2,37E-01	9,10E-04	1,05E-04	2,38E-01		
Eutrophication potential												[kg (PO ₄) ³⁻ eq.]	9,03E-03	6,47E-05	8,45E-06	9,10E-03		
Formation potential of tropospheric ozone												[kg Ethene eq.]	2,84E-02	1,61E-04	6,02E-05	2,86E-02		
Abiotic depletion potential (ADP-elements) for non-fossil resources												[kg Sb eq.]	3,39E-01	0,00E+00	1,36E-06	3,39E-01		
Abiotic depletion potential (ADP-fossil fuels) for fossil resources												[MJ]	5,93E+02	9,87E-01	4,21E+00	5,99E+02		
Environmental aspects on resource use: 1 m²																		
Indicator												Unit	A1	A2	A3	A1-A3		
Use of renewable primary energy excluding renewable primary energy resources used as raw materials												[MJ]	INA	INA	INA	INA		
Use of renewable primary energy resources used as raw materials												[MJ]	INA	INA	INA	INA		
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)												[MJ]	5,47E+00	6,64E-02	1,28E-01	5,67E+00		
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials												[MJ]	INA	INA	INA	INA		
Use of non-renewable primary energy resources used as raw materials												[MJ]	INA	INA	INA	INA		
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)												[MJ]	6,53E+02	1,04E+00	4,42E+00	6,58E+02		
Use of secondary material												[kg]	1,60E-01	1,09E-01	0,00E+00	2,69E-01		
Use of renewable secondary fuels												[MJ]	1,46E+00	5,18E-02	0,00E+00	1,52E+00		
Use of non-renewable secondary fuels												[MJ]	1,14E+00	0,00E+00	0,00E+00	1,14E+00		
Net use of fresh water												[dm ³]	INA	INA	INA	INA		
Other environmental information describing waste categories: 1 m²																		
Indicator												Unit	A1	A2	A3	A1-A3		
Hazardous waste disposed												[kg]	5,08E-02	5,27E-08	1,72E-09	5,08E-02		
Non-hazardous waste disposed												[kg]	7,52E-01	4,90E-05	3,29E-06	7,52E-01		
Radioactive waste disposed												[kg]	1,63E-04	0,00E+00	0,00E+00	1,63E-04		
Components for re-use												[kg]	9,43E-05	0,00E+00	5,33E-05	1,48E-04		
Materials for recycling												[kg]	2,87E-01	0,00E+00	2,90E-05	2,87E-01		
Materials for energy recovery												[kg]	2,40E-06	0,00E+00	4,05E-07	2,80E-06		
Exported energy												[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00		

8. VERIFICATION

The process of verification of an EPD is in accordance with EN ISO14025, clause 8 and ISO21930, clause 9. After verification, this EPD is valid for a 5-year-period. EPD does not have to be recalculated after 5 years, if the underlying data have not changed significantly.

The basis for LCA analysis was EN 15804

Independent verification corresponding to ISO 14025 & 8.3.1.



external



internal

External verification of EPD: PhD Eng. Halina Prejzner

LCA, LCI audit and input data verification: PhD Eng. Justyna Tomaszewska

Verification of LCA: PhD Eng. Michał Piasecki

9. NORMATIVE REFERENCES

- ITB PCR A General Product Category Rules for Construction Products
- ISO 14025:2006, Environmental labels and declarations – Type III environmental declarations – Principles and procedure.
- ISO 21930:2017, Sustainability in buildings and civil engineering works – Core rules for environmental product declarations of construction products and services
- ISO 14044:2006, Environmental management – Life cycle assessment – Requirements and guidelines.
- ISO 15686-1:2011, Buildings and constructed assets – Service life planning – Part 1: General principles and framework
- ISO 15686-8:2008, Buildings and constructed assets – Service life planning – Part 8: Reference service life and service-life estimation
- EN 15804:2012, Sustainability in construction works – Environmental product declarations – Core rules for the product category of construction products.
- PN-EN15942:2012, Sustainability of construction works – Environmental product declarations – Communication format business-to-business
- KOBIZE Wskaźniki emisyjności CO₂, SO₂, NO_x, CO i pyłu całkowitego dla energii elektrycznej, grudzień 2017



Instytut Techniki Budowlanej

00-611 Warsaw, Filtrowa 1

Thermal Physics, Acoustics and Environment Department

02-656 Warsaw, Ksawerów 21

CERTIFICATE № 080/2019

of TYPE III ENVIRONMENTAL DECLARATION

Product:

External Thermal Insulation System ATLAS ROKER

Manufacturer:

ATLAS Sp. z o.o.

Św. Teresy 105, 91-222 Łódź, Poland

confirms the correctness of the data included in the development of
Type III Environmental Declaration and accordance with the requirements of the standard

PN-EN 15804+A1:2014-04

Sustainability of construction works.

Environmental product declarations.

Core rules for the product category of construction products.

This certificate, issued for the first time on 10th March 2019 is valid for 5 years
or until amendment of mentioned Environmental Declaration

Head of the Thermal Physic, Acoustics
and Environment Department

Michał Piasecki, PhD



Deputy Director
for Research and Innovation

Krzysztof Kuczyński, PhD

Warsaw, March 2019

