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ECO PLATFORM EPD VERIFIED

Owner: SR-gruppen A/S
No.: MD-22065-EN
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Valid to: 10-10-2027

3rd PARTY **VERIFIED**

EPD

VERIFIED ENVIRONMENTAL PRODUCT DECLARATION | **ISO 14025 & EN 15804**

Owner of declaration
SR-Gruppen A/S
Fuglesangsalle 14
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DK-32678505

Programme
EPD Danmark
www.epddanmark.dk

☐ Industry EPD
☒ Product EPD

Declared product(s)
1000 kg of laid **B**itumen **S**tabilised **M**aterial (BSM) pavement, including production and laying.

Number of declared datasets/product variations: 1

Production site
No stationary production facilities are involved. The production of BSM is done using movable machinery and takes place at the site where the road is constructed.

Product(s) use
BSM is a material used in road construction, mainly as an alternative to conventional asphalt, where it can be used to form the supporting layers beneath the upper asphalt wear layer.

Declared/ functional unit
1000 kg of laid BSM pavement.

Year of production site data (A3)
2021

EPD version

First version – Version 1.0

Udstedt
10-10-2022

Gyldig til:
10-10-2022

Basis of calculation
This EPD is developed in accordance with the European standard EN 15804+A2.

Comparability
EPDs of construction products may not be comparable if they do not comply with the requirements in EN 15804. EPD data may not be comparable if the datasets used are not developed in accordance with EN 15804 and if the background systems are not based on the same database.

Validity
This EPD has been verified in accordance with ISO 14025 and is valid for 5 years from the date of issue.

Use
The intended use of an EPD is to communicate scientifically based environmental information for construction products, for the purpose of assessing the environmental performance of buildings.

EPD type
☐Cradle-to-gate with modules C1-C4 and D
☐Cradle-to-gate with options, modules C1-C4 and D
☐Cradle-to-grave and module D
☐Cradle-to-gate
☒Cradle-to-gate with options

CEN standard EN 15804 serves as the core PCR

Independent verification of the declaration and data, according to EN ISO 14025

☐ internal ☒ external

3. parts verifikator:

Mirko Miseljic

Martha Katrine Sørensen
EPD Danmark

Life cycle stages and modules (MND = module not declared)																
Product			Construction process		Use							End of life				Beyond the system boundary
Raw material supply	Transport	Manufacturing	Transport	Installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Re-use, recovery and recycling potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	X	X	MND	MND	MND	MND	MND	MND	MND	X	X	X	X	X

Product information

Product description

The main product components are shown in the table below.

Material	Weight-% of declared product
Crushed recycled asphalt	94,6%
Cement	0,8%
Water	2,6%
Bitumen	2,1%
Total	**100%**

Bitumen **S**tabilized **M**aterial (BSM) is a material used in road construction, mainly as an alternative to conventional asphalt, where it can be used to form the supporting layers beneath the upper asphalt wear layer. BSM is a relatively new material in Denmark, and both the material composition and manufacturing process differ from conventional asphalt, since BSM consists mainly of crushed recycled asphalt and is manufactured using a cold mixing process.

BSM is made by mixing 95% crushed recycled asphalt with approx. 0.8% cement (adhesive filler), approx. 2-3 percent process water and approx. 2.0-2.2% bitumen, added as a binder. All materials are mixed in a cold mixing process, and the product (BSM) can thereafter be used directly to form the supporting layers beneath the upper asphalt wear layer. The properties and load-bearing capacity of BSM lies somewhere between gravel support layers and traditional hot-mixed asphalt support layers, however both experience and calculations show that BSM can often fully replace traditional hot-mixed asphalt support layers.

Product packaging:

No sales- or transport packaging is used for BSM, since all materials and products are transported directly on the bed of transport trucks.

Representativity

This declaration, including data collection and the modelled foreground system including results, represents the production and laying of 1000kg BSM pavement in Denmark by SR-gruppen. Product specific data are based on average values collected from the year 2021. Background data are based on datasets from the GaBi 10.6 database, and are less than 5 years old. Generally, the used background datasets are of high quality, and the majority of the datasets are only a couple of years old.

Hazardous substances

The product declared within this EPD (BSM pavement) does not contain substances listed on the "Candidate List of Substances of Very High Concern for authorisation"

(http://echa.europa.eu/candidate-list-table)

Essential characteristics

BSM must comply with the requirements described in AAB for BSM-KMA, which can be found using the following link (Find specific documents under "Asfaltbelægninger" --> "BSM-KMA -AAB/SAB-P"):
https://www.asfaltindustrien.dk/Login/Intranet/Forside/Bibliotek/Vejregelsamling/

Further technical information can be obtained by contacting the manufacturer or on the manufacturer's website:

https://www.sr-gruppen.dk/

Reference Service Life (RSL)

The reference service life is based on information directly from SR-Gruppen, and from their knowledge and experience with BSM. The lifetime may however differ depending on the road type in which BSM is used.

The technical maximum service life of BSM is set to up to 50 years under normal conditions.

Picture of product(s)

LCA background

Declared unit

The LCI and LCIA results in this EPD relates to 1000 kg of laid BSM pavement.

Name	Value	Unit
Declared unit	1000	kg
Density	NA	NA
Conversion factor to 1 kg.	0,001	-

Functional unit

"Not defined"

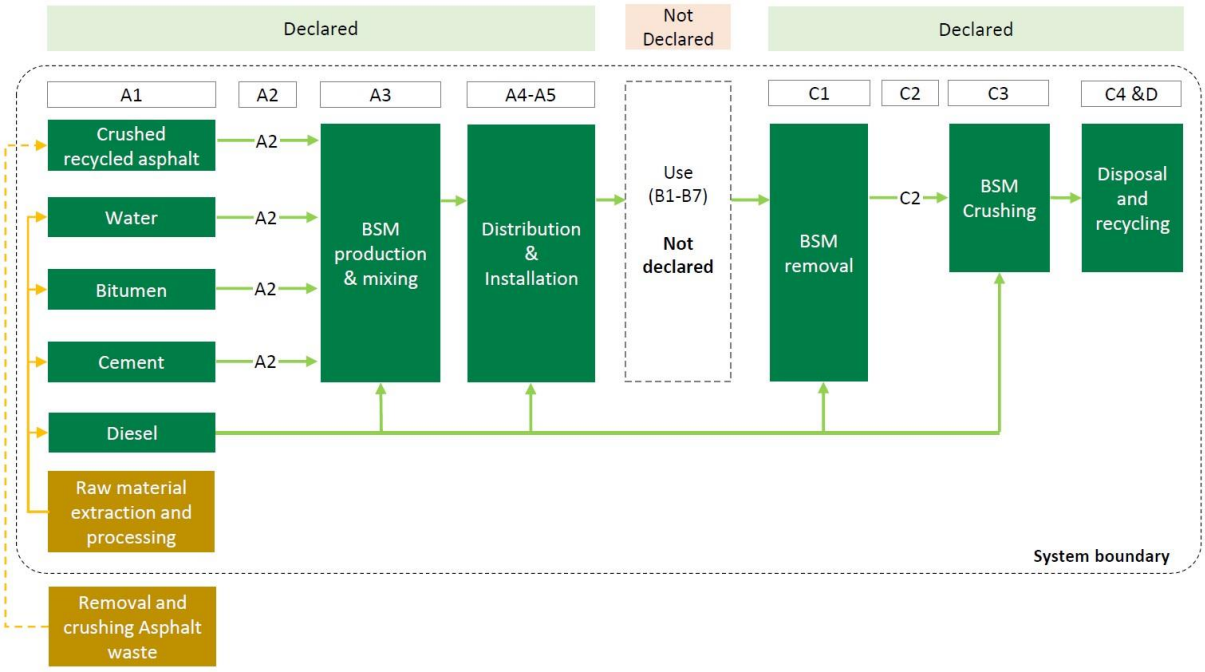
PCR

This EPD is developed according to the core rules for the product category of construction products in EN 15804.

Guarantee of Origin – certificates

No certificates are used during the process of manufacturing or laying of BSM.

Flowdiagram



System boundary

This EPD is based on a "Cradle to gate with options, modules A4-A5, C1–C4, and module D" LCA, in which 100 weight-% has been accounted for.

The general rules for the exclusion of inputs and outputs follows the requirements in EN 15804, 6.3.5, where the total of neglected input flows per module shall be a maximum of 5 % of energy usage and mass and 1 % of energy usage and mass for unit processes.

All activities related to BSM production are separated from all other production activities at SR-Gruppen. This means that no allocation of the emissions, energy, and materials used for BSM is done, as there are no co-products involved in the manufacturing process. Thus, all materials, energy and emissions from the production of BSM are solely related to BSM production.

Product stage (A1-A3) includes:
A1 – Extraction and processing of raw materials

A2 – Transport to the production site

A3 – Mixing and Manufacturing of BSM

The product stage comprises the acquisition of all raw materials and energy, transport to the production site, as well as the mixing and production of BSM. The LCA results are declared in aggregated form for the product stage, which means, that the sub-modules A1, A2 and A3 are declared as one module A1-A3.

A temporary BSM manufacturing site is set up with every new project, close to where the road is constructed. The manufacturing equipment consists of diesel driven and movable machinery. This means that there are no stationary production facilities involved in the manufacturing of BSM, and that all equipment is instead transported to each new construction site. The raw materials are transported to the mixing/production site (A2), coming from specific suppliers. The transport distances for the input materials used in the modelling are calculated based on the weighted average distance to each production location in 2021. The weighting is done on a mass basis, according to the share of the total BSM being manufactured at each production site in 2021. Recycled crushed asphalt will however normally be collected at the nearest asphalt storage site.

BSM is made (A3) by mixing 95% crushed recycled asphalt with approx. 0.8% cement (adhesive filler), approx. 2-3% process water and approx. 2.0-2.2% bitumen, added as a binder. All materials are mixed in a cold mixing process, and the product (BSM) is hereafter ready to be used in road construction. The specific amount of recycled asphalt, cement, water, and bitumen used in the production of BSM differs slightly at each production site, due to small variations in the accuracy of the measurements during mixing. To determine the specific composition of BSM for this study, the average composition of BSM in 2021 across all sites was used, since the manufacturing set-up and BSM recipe is identical at all sites.

Construction process stage (A4-A5) includes:
Once the BSM has been produced, it will be loaded onto trucks and moved to the actual road construction site. The internal transport between the production site and the laying site is done using the same machines which are also involved in the laying of the BSM pavement, and therefore the diesel consumption from internal transport in A4 is included in the total diesel consumption for the machines used in A5. There are therefore no recorded impacts in A4 since these are included in A5.

At the road construction site, the BSM is loaded unto specialized paving machines, where it is laid and later compressed using drum rolls, to form the final supporting pavement layers on the road.

Use stage (B1-B7) includes:

Not declared

End of Life (C1-C4) includes:
The end-of-life scenario used for this study, is based on common practice in Denmark today. The pavement will be removed from the road (C1), whereafter it will be crushed (C3) and transported back to an asphalt storage facility (C2). When the crushed BSM pavement is delivered at the asphalt storage facility, it is no longer considered as waste, since it is has now become a new material which can be recycled back into asphalt production once again.

Re-use, recovery and recycling potential (D) includes:

In Denmark crushed asphalt/BSM will either be recycled back into the production of new asphalt, or be used as substitution for natural aggregates/gravel in construction of unbound base layers.

As a conservative approach it is assumed that crushed recycled BSM will substitute 100% natural aggregates (gravel) in the market. However, since the main input of materials used in the production of BSM is crushed recycled asphalt, the environmental savings from recycling crushed BSM are correspondingly small, as it is only the virgin materials which are given a credit.

LCA results

ENVIRONMENTAL IMPACTS PER ton BSM									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	[kg CO2 eq.]	1,78E+01	0,00E+00	1,60E+00	7,81E-01	2,19E+00	1,56E+00	0,00E+00	-1,11E-01
GWP-fossil	[kg CO2 eq.]	1,76E+01	0,00E+00	1,58E+00	7,71E-01	2,17E+00	1,54E+00	0,00E+00	-1,13E-01
GWP-bio	[kg CO2 eq.]	1,31E-01	0,00E+00	8,48E-03	4,14E-03	9,08E-03	8,28E-03	0,00E+00	2,10E-03
GWP-luluc	[kg CO2 eq.]	2,86E-02	0,00E+00	1,07E-02	5,21E-03	1,48E-02	1,04E-02	0,00E+00	-2,93E-04
ODP	[kg CFC 11 eq.]	1,47E-11	0,00E+00	1,55E-13	7,59E-14	2,16E-13	1,52E-13	0,00E+00	-6,33E-13
AP	[mol H+ eq.]	5,22E-02	0,00E+00	2,11E-02	1,03E-02	2,47E-03	2,07E-02	0,00E+00	-5,64E-04
EP-fw	[kg PO4 eq.]	2,55E-05	0,00E+00	5,65E-06	2,76E-06	7,87E-06	5,52E-06	0,00E+00	-4,98E-07
EP-mar	[kg N eq.]	1,64E-02	0,00E+00	9,54E-03	4,66E-03	7,98E-04	9,32E-03	0,00E+00	-1,96E-04
EP-ter	[mol N eq.]	1,81E-01	0,00E+00	1,05E-01	5,13E-02	9,55E-03	1,03E-01	0,00E+00	-2,16E-03
POCP	[kg NMVOC eq.]	5,39E-02	0,00E+00	3,09E-02	1,51E-02	2,13E-03	3,02E-02	0,00E+00	-5,35E-04
ADP-mm[1]	[kg Sb eq.]	4,04E-06	0,00E+00	1,59E-07	7,79E-08	2,22E-07	1,56E-07	0,00E+00	-1,92E-08
ADP-fos[1]	[MJ]	9,56E+02	0,00E+00	2,08E+01	1,01E+01	2,89E+01	2,03E+01	0,00E+00	-1,67E+00
WDP[1]	[m3]	1,37E+00	0,00E+00	1,77E-02	8,65E-03	2,46E-02	1,73E-02	0,00E+00	-1,26E-02
Caption	GWP-total = Globale Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-bio = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidifcation; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water use								
Disclaimer	[1] The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.								

ADDITIONAL ENVIRONMENTAL IMPACTS PER ton BSM									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PM	[Disease incidence]	6,44E-07	0,00E+00	8,47E-07	4,14E-07	1,70E-08	8,28E-07	0,00E+00	-3,25E-08
IRP[2]	[kBq U235 eq.]	2,62E-01	0,00E+00	5,84E-03	2,86E-03	8,14E-03	5,71E-03	0,00E+00	-1,91E-02
ETP-fw[1]	[CTUe]	7,52E+02	0,00E+00	1,48E+01	7,21E+00	2,05E+01	1,44E+01	0,00E+00	-9,30E-01
HTTP-c[1]	[CTUh]	1,46E-08	0,00E+00	3,03E-10	1,48E-10	4,22E-10	2,96E-10	0,00E+00	-7,04E-11
HTTP-nc[1]	[CTUh]	6,77E-07	0,00E+00	2,96E-08	1,45E-08	2,29E-08	2,89E-08	0,00E+00	-7,12E-09
SQP[1]	-	2,87E+01	0,00E+00	8,79E+00	4,29E+00	1,22E+01	8,59E+00	0,00E+00	-4,91E-01
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)								
Disclaimers	[1] The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.								
	[2] This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.								

RESSOURCE CONSUMPTION PER ton BSM									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	[MJ]	1,23E+01	0,00E+00	1,44E+00	7,03E-01	2,00E+00	1,41E+00	0,00E+00	-4,97E-01
PERM	[MJ]	#N/A	0,00E+00	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PERT	[MJ]	1,23E+01	0,00E+00	1,44E+00	7,03E-01	2,00E+00	1,41E+00	0,00E+00	-4,97E-01
PENRE	[MJ]	9,57E+02	0,00E+00	2,09E+01	1,02E+01	2,90E+01	2,04E+01	0,00E+00	-1,67E+00
PENRM	[MJ]	#N/A	0,00E+00	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PENRT	[MJ]	9,57E+02	0,00E+00	2,09E+01	1,02E+01	2,90E+01	2,04E+01	0,00E+00	-1,67E+00
SM	[kg]	9,46E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m3]	3,93E-02	0,00E+00	1,66E-03	8,12E-04	2,32E-03	1,62E-03	0,00E+00	-5,18E-04
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water								

WASTE CATEGORIES AND OUTPUT FLOWS **PER ton BSM**									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
HWD	[kg]	3,08E-09	0,00E+00	1,10E-10	5,39E-11	1,54E-10	1,08E-10	0,00E+00	-8,56E-11
NHWD	[kg]	1,57E-01	0,00E+00	3,40E-03	1,66E-03	4,73E-03	3,32E-03	0,00E+00	-2,26E+00
RWD	[kg]	1,92E-03	0,00E+00	3,87E-05	1,89E-05	5,39E-05	3,78E-05	0,00E+00	-1,15E-04
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,00E+03
MER	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10^2 or 195, while 1,12E-11 is the same as 1,12*10^-11 or 0,0000000000112.								

BIOGENIC CARBON CONTENT PER ton BSM		
Parameter	**Unit**	**At the factory gate**
Biogenic carbon content in product	[kg C]	0.00E+00
Biogenic carbon centent in accompanying packagaing	[kg C]	0,00E+00
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO2	

Additional information

LCA interpretation

LCIA are relative expressions and do not predict impacts category endpoints, the exceeding of thresholds, safety margins or risks. To understand which processes contribute the most to the overall impacts, a process contribution analysis was conducted. In the tables presented below, the processes contributing the most to each specific impact category is presented.

Results from the process contribution analysis for the core environmental impact indicators.

ENVIRONMENTAL IMPACTS				
Impact Category	**Unit**	**Maximum contribution on category**	**Process**	**Percentage of category**
Climate Change - total	[kg CO2 eq.]	7,64E+00	A1: Bitumen	32%
Climate Change, fossil	[kg CO2 eq.]	7,53E+00	A1: Bitumen	31%
Climate Change, biogenic	[kg CO2 eq.]	1,13E-01	A1: Bitumen	30%
Climate Change, land use and land use change	[kg CO2 eq.]	1,48E-02	C2: Transport of waste	23%
Ozone depletion	[kg CFC 11 eq.]	8,96E-12	A1: Bitumen	56%
Acidification	[mol H+ eq.]	2,27E-02	A1: Bitumen	32%
Eutrophication, freshwater	[kg PO4 eq.]	9,30E-06	A1: Bitumen	19%
Eutrophication, marine	[kg N eq.]	4,25E-03	A1: Bitumen	17%
Eutrophication, terrestrial	[mol N eq.]	4,64E-02	A1: Bitumen	17%
Photochemical ozone formation, human health	[kg NMVOC eq.]	2,10E-02	A1: Bitumen	27%
Resource use, mineral and metals	[kg Sb eq.]	3,49E-06	A1: Bitumen	75%
Resource use, fossils	[MJ]	8,80E+02	A1: Bitumen	85%
Water use	[m3]	1,12E+00	A1: Water	77%

Results from the process contribution analysis for the additional environmental impact indicators.

ADDITIONAL ENVIRONMENTAL IMPACTS				
Impact Category	**Unit**	**Maximum contribution on category**	**Process**	**Percentage of category**
Particulate matter	[Disease incidence]	1,57E-07	A1: Bitumen	22%
Ionising radiation, human health	[kBq U235 eq.]	1,79E-01	A1: Cement	59%
Ecotoxicity, freshwater	[CTUe]	7,02E+02	A1: Bitumen	87%
Human toxicity, cancer	[CTUh]	1,31E-08	A1: Bitumen	83%
Human toxicity, non-cancer	[CTUh]	5,50E-07	A1: Bitumen	73%
Soil Quality	-	1,22E+01	C2: Transport of waste	21%

Results from the process contribution analysis for the resource consumption indicators.

RESSOURCE CONSUMPTION				
Impact Category	**Unit**	**Maximum contribution on category**	**Process**	**Percentage of category**
Use of renewable primary energy	[MJ]	4,84E+00	A1: Bitumen	26%
Primary energy resources used as raw materials	[MJ]	#N/A	#N/A	#N/A
Total use of renewable primary energy resources	[MJ]	4,84E+00	A1: Bitumen	26%
Use of non-renewable primary energy	[MJ]	8,81E+02	A1: Bitumen	85%
Non-renewable primary energy resources used as raw materials	[MJ]	8,00E+02	A1: Bitumen	100%
Total use of non-renewable primary energy resources	[MJ]	8,81E+02	A1: Bitumen	50%
Input of secondary material	[kg]	9,46E+02	A1: Recycled asphalt	100%
Use of renewable secondary fuels	[MJ]	#N/A	#N/A	#N/A
Use of non renewable secondary fuels	[MJ]	#N/A	#N/A	#N/A
Use of net fresh water	[m3]	2,61E-02	A1: Water	56%

Results from the process contribution analysis for the End-of-life (waste categories and output flows)

WASTE CATEGORIES AND OUTPUT FLOWS				
Impact Category	**Unit**	**Maximum contribution on category**	**Process**	**Percentage of category**
Hazardous waste disposed	[kg]	2,03E-09	A1: Bitumen	57%
Non-hazardous waste disposed	[kg]	-2,26E+00	D: Recovery	-93%
Radioactive waste disposed	[kg]	1,06E-03	A1: Cement	49%
Components for re-use	[kg]	N/A	N/A	N/A
Materials for Recycling	[kg]	1,00E+03	D: Recovery	100%
Material for Energy Recovery	[kg]	N/A	N/A	N/A
Exported electrical energy	[MJ]	N/A	N/A	N/A
Exported thermal energy	[MJ]	N/A	N/A	N/A

The results show that the production of Bitumen is the dominating process in most of the environmental impact categories, by contributing between 17% and 85% to the total impacts. The production of Bitumen makes up 32% of the total Climate Change impacts, while only making up around 2% of the total material inputs to BSM. Manufacturing of Cement also contributes significantly to most impact categories, e.g. by making up 24% of the total Climate change impacts during the life cycle of BSM. When only considering the manufacturing of materials (A1), Bitumen and Cement make most of the impacts, since the input of recycled asphalt is assumed to be burden free, and the use of water does not cause any significant environmental impacts. The impacts caused in A2-A5 and C1-C4 are mainly caused by the burning of diesel in machinery and in transport trucks.

Technical information on scenarios

Transport to the building site (A4)

Scenario information	Value	Unit
Fuel type	Diesel	-
Vehicle type	Trucks, Construction machines	-
Transport distance	N/A	km
Capacity utilisation (including empty runs)	N/A	%
Gross density of products transported	N/A	kg/m3
Capacity utilisation volume factor	N/A	-

Installation of the product at the road construction site (A5)

Scenario information	Value	Unit
Ancillary materials	0	kg
Water use	0	m3
Other resource use	0	kg
Energy type and consumption	0,21	Liters of diesel per ton of BSM
Waste materials	0	kg
Output materials	0	kg
Direct emissions to air, soil or water	0	kg

Reference service life

RSL information	Unit
Reference service Life	50 Years
Declared product properties	Information for all topics can be found on the company's website, by using the following link: https://www.sr-gruppen.dk/
Design application parameters	
Assumed quality of work	
Outdoor environment	
Indoor environment	
Usage conditions	
Maintenance	

End of life (C1-C4)

Scenario information	Value	Unit
Collected separately	1000	kg
Collected with mixed waste	0	kg
For reuse	0	kg
For recycling	1000	kg
For energy recovery	0	kg
For final disposal	0	kg
Assumptions for scenario development		As appropriate

Re-use, recovery and recycling potential (D)

Scenario information/Materiel	Value	Unit
Crushed BSM pavement can replace natural aggregates (Gravel) in the market.	1000	kg
		kg
		kg

Indoor air

The EPD does not give information on release of dangerous substances to indoor air because the horizontal standards on the relevant measurements are not available. Read more in EN15804+A1 chapter 7.4.1.

Soil and water

The EPD does not give information on release of dangerous substances to soil and water because the horizontal standards on the relevant measurements are not available. Read more in EN15804+A1 chapter 7.4.2.

References

Publisher	epddanmark www.epddanmark.dk
Programme operator	Danish Technological Institute Buildings & Environment Gregersensvej DK-2630 Taastrup www.teknologisk.dk
LCA-practitioner	Danish Technological Institute Buildings & Environment Gregersensvej DK-2630 Taastrup www.teknologisk.dk
LCA software /background data	Thinkstep GaBi version 10.6.1.35, 2022 including databases www.gabi-software.com
3rd party verifier	Mirko Miseljic FORCE Technology Park Alle 345 DK-2605 Brøndby www.forcetechnology.com

General programme instructions
General Programme Instructions, version 2.0, spring 2020
www.epddanmark.dk

EN 15804
DS/EN 15804 + A2:2019 - "Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products"

EN 15942
DS/EN 15942:2011 – " Sustainability of construction works – Environmental product declarations – Communication format business-to-business"

ISO 14025
DS/EN ISO 14025:2010 – " Environmental labels and declarations – Type III environmental declarations – Principles and procedures"

ISO 14040
DS/EN ISO 14040:2008 – " Environmental management – Life cycle assessment – Principles and framework"

ISO 14044
DS/EN ISO 14044:2008 – " Environmental management – Life cycle assessment – Requirements and guidelines"