

# Environmental Product Declaration

In accordance with 14025 and EN15804 +A2

Fabriksbetong – 7 representativa produktergrupper baserat på kg CO2-ekv



**Ägare av deklARATIONEN:**  
ABT Betong AB

**ProduktNAMN:**  
Fabriksbetong –7 representativa  
produktergrupper baserat på kg CO2-ekv

**Deklarerad enhet:**  
1 m3 fabriksbetong

**Produktkategori /PCR:**  
NPCR Part A: Construction products and services.  
Ver. 2.0. March 2021. NPCR 020 Part B for  
Concrete and concrete elements. Ver. 3.0.  
September 2021. SS-EN  
15804:2012+A2:2019/AC:2021 SS-EN 16757:2017

**Programoperatör och utgivare:**  
The Norwegian EPD foundation

**Deklarationsnummer:**  
NEPD-6215-5473-SE

**Registreringsnummer:**  
NEPD-6215-5473-SE

**Godkänd datum:** 05.03.2024

**Giltig till:** 05.03.2029

# Generell information

## Produkt:

Fabriksbetong – 7 representativa produktergrupper baserade på kg CO<sub>2</sub>-ekv

## Programoperatör:

The Norwegian EPD Foundation  
Post Box 5250 Majorstuen, 0303 Oslo, Norway  
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## Deklarationsnummer:

NEPD-6215-5473-SE

## Deklarationen baseras på PCR:

NPCR Part A: Construction products and services. Ver. 2.0. March 2021. NPCR 020 Part B for Concrete and concrete elements. Ver. 3.0. September 2021.  
SS-EN 15804:2012+A2:2019/AC:2021  
SS-EN 16757:2017

## Utlåtande om ansvar:

Ägaren av deklARATIONEN är ansvarig för den bakomliggande informationen. EPD Norge är inte ansvarig för information om tillverkaren eller bakomliggande data för livscykelanalys.

## Deklarerad enhet:

1 m<sup>3</sup> fabriksbetong

## Deklarerad enhet med tillval:

Inkluderade moduler: A1-A3, A4, C1-C4, D

## Funktionell enhet:

-

## Verifikation av EPD-verktyg:

Oberoende tredjepartsgranskning av verktyg, bakgrundsdata och test-EPD är utfört i enlighet med EPD-Norges prosedurer och riktlinjer för verifiering och godkännande av EPD-verktyg.

Guangli Du, Aalborg University  
(Ingen signatur krävs)

## Ägare av deklARATIONEN:

ABT Betong  
Kontaktperson: Peter Kumpulainen  
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## Tillverkare:

ABT Betong AB  
adress: Bergväggsvägen 5, 192 48 Sollentuna  
Tel: 08-514 401 01  
e-mail: betong@abtbolagen.se

## Produktionsort:

Sollentuna, Nykvarn

## Kvalitet-/Miljöledningssystem:

ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

## Organisationsnummer:

559078-5381

## Godkänd datum:

05.03.2024

## Giltig till:

05.03.2029

## Årtal för studien:

2023

## Jämförbarhet:

EPD:er från andra program än EPD Norge är inte nödvändigtvis jämförbara. EPD av byggmaterial är inte nödvändigtvis jämförbara om de inte överensstämmer med EN 15804 och ses i ett byggsammanhang.

## MiljövarudeklARATIONEN är utarbetad av:

Godkänt EPD-verktyg och databas:  
IVL EPD generator Betong NEPDT28

EPD framtagen av: Malin Dalborg

EPD kontrollerad av: Nora Fischer

Håkon Hauan, Verkställande direktör EPD-Norge

## Produkt

### Produktbeskrivning

Fabriksbetong för grundläggning, golv och bärande konstruktioner.

### Representativt för gruppering i produktgrupper:

Produkterna är typrecept för de användningsområden som normalt sett används vid produktion av fabriksstillverkad betong, som är processcertifierad och tillverkas enligt SS-EN 206 samt svensk tillämpningsstandard SS 137003.

Fabriksbetongen levereras till byggarbetsplatsen genom betongbil och används till gjutning av armerade betongkonstruktioner. Betong är återvinningsbart.

Material	Grupp 1 C25/30 S4 16 Miljö [vikt-%]	Grupp 2 C25/30 S4 16 [vikt-%]	Grupp 3 C32/40 S5 16 0,55 [vikt-%]	Grupp 4 C45/55 S5 16 0,40 [%]	Grupp 5 C35/45 S4 16 0,40 Frys Inf [%]	Grupp 6 C45/55 S5 16 0,40 Inf [%]	Grupp 7 C35/45 S5 8 0,38 Inf Sprut 40 kg 4D stålfiber [%]
Kg CO2/m3	130-160 kg	161-190 kg	191-230 kg	231-280 kg	281-340 kg	341-415 kg	416-490
Ballast, kross/natur	83.1	80.4	78.3	74.6	75.6	72.6	68.7
Cement	10.7	12.1	14.5	18.7	15.4	20.1	21.8
Merit (GGBS)	-	-	-	-	2.7	-	-
Tillsatsmedel	0.1	0.05	0.1	0.2	0.3	0.2	0.3
Övriga tillsatsmaterial	-	-	-	-	-	-	1.8
Vatten	6.1	7.4	7.1	6.5	6.0	7.1	7.4
Total	100	100	100	100	100	100	100
Densitet [kg/m3]	2336	2317	2300	2336	2317	2336	2289

### Teknisk data:

Mängden cement kan variera med max 10% av vad som anges i produktinnehåll.

Specifikation	Grupp 1 C25/30 S4 16 Miljö [vikt-%]	Grupp 2 C25/30 S4 16 [vikt-%]	Grupp 3 C32/40 S5 16 0,55 [vikt-%]	Grupp 4 C45/55 S5 16 0,40 [%]	Grupp 5 C35/45 S4 16 0,40 Frys Inf [%]	Grupp 6 C45/55 S5 16 0,40 Inf [%]	Grupp 7 C35/45 S5 8 0,38 Inf Sprut 40 kg 4D stålfiber [%]
Hållfasthetsklass	C25/30	C25/30	C32/40	C45/55	C35/45	C45/55	C35/45
Exponeringsklass	XC1	XC1	XC2	XC4-XA3- XS3-XD3	XC4-XA1	XC4-XA3- XS3-XD3	XC4-XA1
Vattencementtal	0,68	0,68	0,55	0,40	0,50	0,40	0,50
Cement	CEM II/B-M (S-LL) 52.5 N	CEM II/B-M (S-LL) 52.5 N	CEM II/B-M (S-LL) 52.5 N	CEM II/B-M (S-LL) 52.5 N	CEM I 42.5 N-SR 3	CEM I 42.5 N-SR 3	CEM I 42.5 N-SR 3
Standarder	SS 137003, EN 206-1						

### Marknadsområde:

Sverige

### Referenslivslängd produkt:

Livslängd > 50 år. Livslängden både inomhus och utomhus säkerställs genom rätt vald betongkvalitet och täckskikt samt genom att uppfylla kraven i betongstandarderna och eurocode.

### Referenslivslängd byggnad:

Livslängd > 50 år

## LCA: Beräkningsregler

### Deklarerad enhet:

1 m<sup>3</sup> fabriksbetong

### Datakvalitet:

Specifika data visas i tabellen nedan. Transporter inkluderar tom återtransport och är baserade på data från Sphera. Övrigt material samt data för olika energityper är baserade på olika databaser. Energidata är räknad som ett viktat medelvärde från faktisk förbrukning för angivna fabriker.

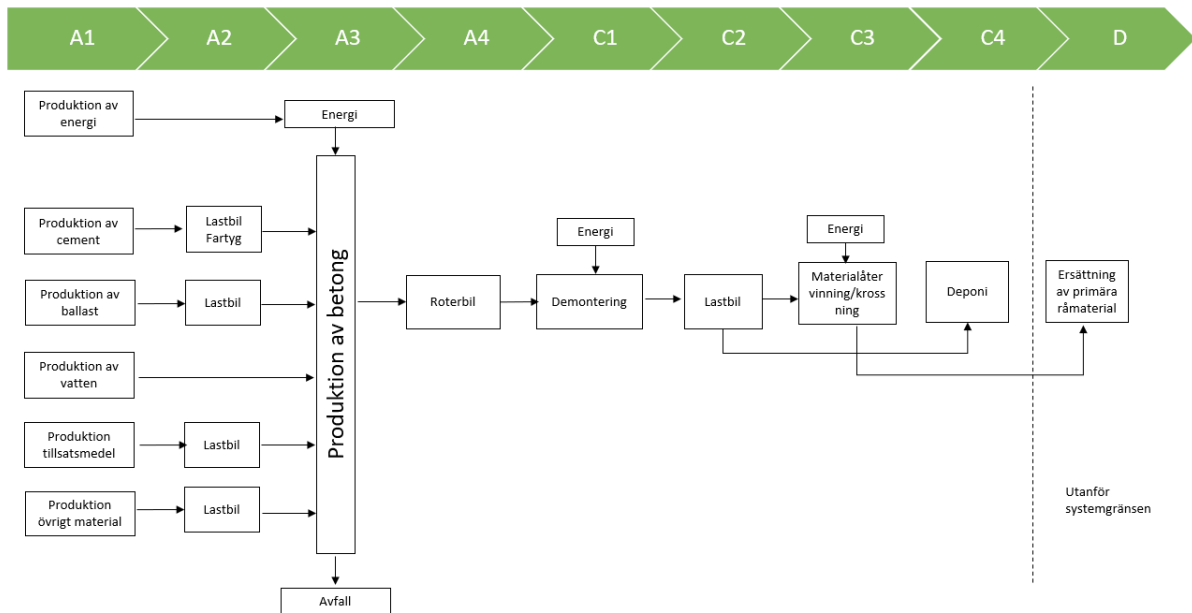
Material	Referens	Kvalitet	År
CEM II/B-M (S-LL) 52.5 N (Viridiscement)	NEPD-5724-5012-EN	EPD	2024
CEM I 42.5 N-SR 3 MH/LA (Infracement)	NEPD-4971-4320-EN	EPD	2023
Återvunna schaktmassor	S-P-0609	EPD	2023
Ballast, natur, kross	Ecoinvent	Databas	2020
Tillsatsmedel 1 Air entrainers	EPD-EFC-20210193-IBG1-EN	EPD	2021
Tillsatsmedel 2 Plasticisers	EPD-EFC-20210198-IBG1-EN	EPD	2021
GGBS	S-P-05377	EPD	2022
Vatten	Sphera	Databas	2020

### Allokering:

Allokeringen på produktionsanläggningen baseras på årliga miljöbelastningar som delats med den totala produktionen oavsett betongkvalitet. LCA-data som används baseras på EPDer som följer EN15804 eller data från Sphera.

### Systemgränser:

A1-A3, A4, C1-C4, D.



**Figur 1.** Flödesschema över processer medräknade i livscykeln.

### Cut-off kriterier:

Studien tillämpar en cut-off på 1% enligt EN 15804. Det innebär att mängden material som exkluderats inte överstiger den gränsen.

## LCA: Scenarier och annan teknisk information

Följande information beskriver scenarier i livscykeln.

### Transport från tillverkningen till byggarbetsplatsen (A4)

Typ	Fyllnadsgrad (incl. retur) % (80+0%)	Typ av fordon	Avstånd KM	Bränsle-/Energiförbrukning	Värde (l/t)
Betongbil	40	Roterbil, 6 m <sup>3</sup>	15	0,046 liter/ton, km	0.7

Baserat på medeltransport

### Slutskede (C1, C3, C4)

	Enhet	Grupp 1 C25/30 S4 16 Miljö	Grupp 2 C25/30 S4 16	Grupp 3 C32/40 S5 16 0,55	Grupp 4 C45/55 S5 16 0,40	Grupp 5 C35/45 S4 16 0,40 Frys Inf	Grupp 6 C45/55 S5 16 0,40 Inf	Grupp 7 C35/45 S5 8 0,38 Inf Sprut 40 kg 4D stålfiber
C1. Diesel rivning*	MJ	84.0	83.4	83.9	84.5	84.4	85.2	83.4
C3. Diesel krossning*	MJ	16.8	16.7	16.8	16.9	16.9	17.2	16.7
C3. Återvinning	kg	2334	2318	2330	2347	2345	2366	2316
C4. Deponi	kg	0	0	0	0	0	0	0

\*Erlandsson & Pettersson (2015)

## Transport till avfallsbehandling (C2)

Typ	Fyllnadsgrad (incl. retur) %	Typ av fordon	Avstånd (km)	Bränsle- /Energiförbrukning	Värde (l/t)
Lastbil	45	Lastbil, 40t	35	0,026 liter/ton, km	0,9

Schablon enligt branschöverenskommelse.

## Fördelar och belastningar utanför systemgränsen (D)

	Enhet	Grupp 1 C25/30 S4 16 Miljö	Grupp 2 C25/30 S4 16	Grupp 3 C32/40 S5 16 0,55	Grupp 4 C45/55 S5 16 0,40	Grupp 5 C35/45 S4 16 0,40 Frys Inf	Grupp 6 C45/55 S5 16 0,40 Inf	Grupp 7 C35/45 S5 8 0,38 Inf Sprut 40 kg 4D stålfiber
Ersättning av primär ballast	kg	1836	2018	1968	1968	1929	1984	1680

Scenariot är baserat på en återvinningsgrad på 100% enligt modul C.

## Övrig teknisk information

Ingen övrig information.

## LCA: Resultat

Systemgränser (X=ingår, MID= modul ingår inte, MIR=modul inte relevant)

Produktskedet			Byggprocess-skedet stage		Användningsskedet								Slutskedet				Fördelar och belastningar utanför systemgränsen
Råvaruförsörjning	Transport	Tillverkning	Transport	Konstruktions- och installationsprocessen	Användning	Underhåll	Reparation	Utbyte	Renovering	Driftsenergi	Driftsvatten	Demontering	Transport	Avfallsbehandling	Avfallshantering	Potential för återanvändning och/eller återvinning uttryckt som nettopåverkan och miljönytta	
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D	
X	X	X	X	MID	MID	MID	MID	MID	MID	MID	MID	X	X	X	X	X	

### Huvudsakliga miljöpåverkansindikatorer: Produktgrupp 1 C25/30 S4 16 Miljö

Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP-total	kg CO <sub>2</sub> eq.	1.56E+02	4.92E+00	7.15E+00	6.47E+00	1.43E+00	0.00E+00	-2.64E+00
GWP-fossil	kg CO <sub>2</sub> eq.	1.55E+02	4.82E+00	7.01E+00	6.34E+00	1.40E+00	0.00E+00	-2.62E+00
GWP-biogenic	kg CO <sub>2</sub> eq.	4.25E-01	6.07E-02	8.82E-02	7.98E-02	1.76E-02	0.00E+00	-2.44E-04
GWP-LULUC	kg CO <sub>2</sub> eq.	1.21E-01	3.99E-02	5.80E-02	5.25E-02	1.16E-02	0.00E+00	-1.96E-02
ODP	kg CFC11 eq.	3.81E-06	6.23E-16	9.05E-16	8.19E-16	1.81E-16	0.00E+00	-7.97E-15
AP	mol H <sup>+</sup> eq.	4.83E-01	2.81E-02	4.08E-02	3.69E-02	8.16E-03	0.00E+00	-1.44E-02
EP-freshwater	kg P eq.	1.20E-03	1.45E-05	2.10E-05	1.90E-05	4.21E-06	0.00E+00	-1.96E-05
EP-marine	kg N eq.	1.93E-01	1.38E-02	2.00E-02	1.81E-02	4.00E-03	0.00E+00	-6.86E-03
EP-terrestrial	mol N eq.	2.07E+00	1.52E-01	2.21E-01	2.00E-01	4.42E-02	0.00E+00	-7.42E-02
POCP	kg NMVOC eq.	4.78E-01	2.65E-02	3.85E-02	3.48E-02	7.69E-03	0.00E+00	-1.34E-02
ADP-M&M	kg Sb eq.	2.62E-04	3.71E-07	5.39E-07	4.88E-07	1.08E-07	0.00E+00	-4.66E-07
ADP-fossil	MJ	7.75E+02	6.49E+01	9.43E+01	8.54E+01	1.89E+01	0.00E+00	-6.17E+01
WDP	m <sup>3</sup>	1.78E+04	4.23E-02	6.15E-02	5.57E-02	1.23E-02	0.00E+00	-2.44E+01

**GWP-total:** Global Warming Potential; **GWP-fossil:** Global Warming Potential fossil fuels; **GWP-biogenic:** Global Warming Potential biogenic; **GWP-LULUC:** Global Warming Potential land use and land use change; **ODP:** Depletion potential of the stratospheric ozone layer; **AP:** Acidification potential, Accumulated Exceedance; **EP-freshwater:** Eutrophication potential, fraction of nutrients reaching freshwater end compartment; See "additional requirements" for indicator given as PO<sub>4</sub> eq. **EP-marine:** Eutrophication potential, fraction of nutrients reaching freshwater end compartment; **EP-terrestrial:** Eutrophication potential, Accumulated Exceedance; **POCP:** Formation potential of tropospheric ozone; **ADP-M&M:** Abiotic depletion potential for non-

fossil resources (minerals and metals); **ADP-fossil**: Abiotic depletion potential for fossil resources; **WDP**: Water deprivation potential, deprivation weighted water consumption

### Övriga miljöpåverkansindikatorer: Produktgrupp 1 C25/30 S4 16 Miljö

Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
PM	Disease incidence	2.30E-06	9.78E-08	1.42E-07	1.29E-07	2.84E-08	0.00E+00	-6.04E-08
IRP	kBq U235 eq.	4.90E+00	1.12E-02	1.63E-02	1.48E-02	3.27E-03	0.00E+00	-1.35E+00
ETP-fw	CTUe	6.18E+02	4.69E+01	6.81E+01	6.16E+01	1.36E+01	0.00E+00	-3.82E+01
HTP-c	CTUh	1.93E-08	9.46E-10	1.38E-09	1.24E-09	2.75E-10	0.00E+00	-1.14E-09
HTP-nc	CTUh	3.60E-07	5.26E-08	7.64E-08	6.91E-08	1.53E-08	0.00E+00	-4.17E-08
SQP	Dimensionless	4.67E+02	2.23E+01	3.24E+01	2.93E+01	6.48E+00	0.00E+00	-1.67E+02

**PM**: Particulate matter emissions; **IRP**: Ionising radiation, human health; **ETP-fw**: Ecotoxicity (freshwater); **ETP-c**: Human toxicity, cancer effects; **HTP-nc**: Human toxicity, non-cancer effects; **SQP**: Land use related impacts / soil quality

### Resource use: Produktgrupp 1 C25/30 S4 16 Miljö

Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
RPEE	MJ	1.78E+02	3.62E+00	5.26E+00	4.76E+00	1.05E+00	0.00E+00	-3.32E+01
RPEM	MJ	3.31E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TPE	MJ	1.78E+02	3.62E+00	5.26E+00	4.76E+00	1.05E+00	0.00E+00	-3.32E+01
NRPE	MJ	7.62E+02	6.49E+01	9.44E+01	8.54E+01	1.89E+01	0.00E+00	-6.19E+01
NRPM	MJ	1.64E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TRPE	MJ	7.79E+02	6.49E+01	9.44E+01	8.54E+01	1.89E+01	0.00E+00	-6.19E+01
SM	kg	5.73E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	8.08E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	4.81E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
W	m <sup>3</sup>	1.02E+00	4.14E-03	6.02E-03	5.45E-03	1.20E-03	0.00E+00	-6.13E-01

**RPEE**: Renewable primary energy resources used as energy carrier; **RPEM**: Renewable primary energy resources used as raw materials; **TPE**: Total use of renewable primary energy resources; **NRPE**: Non renewable primary energy resources used as energy carrier; **NRPM**: Non renewable primary energy resources used as materials; **TRPE**: Total use of non renewable primary energy resources; **SM**: Use of secondary materials; **RSF**: Use of renewable secondary fuels; **NRSF**: Use of non renewable secondary fuels; **W**: Use of net fresh water

### Slutskede – Avfall: Produktgrupp 1 C25/30 S4 16 Miljö

Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
HW	KG	3.24E-02	3.27E-09	4.76E-09	4.30E-09	9.51E-10	0.00E+00	-1.66E-08
NHW	KG	3.07E+00	9.64E-03	1.40E-02	1.27E-02	2.80E-03	0.00E+00	-2.57E-02
RW	KG	3.34E-02	7.85E-05	1.14E-04	1.03E-04	2.28E-05	0.00E+00	-1.16E-02

**HW**: Hazardous waste disposed; **NHW**: Non hazardous waste disposed; **RW**: Radioactive waste disposed



## Slutskede – Utflöde: Produktgrupp 1 C25/30 S4 16 Miljö

Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
CR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MR	kg	1.06E-03	0.00E+00	0.00E+00	0.00E+00	2.34E+03	0.00E+00	0.00E+00
MER	kg	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	8.38E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ETE	MJ	1.27E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**CR:** Components for reuse; **MR:** Materials for recycling; **MER:** Materials for energy recovery; **EEE:** Exported electric energy; **ETE:** Exported thermal energy

Läsexempel:  $9,0 \text{ E-03} = 9,0 \cdot 10^{-3} = 0,009$

Indikator	Enhet	A1-A3	A4	C1	C2	C3	C4	D
GWP-IOBC	kg CO <sub>2</sub> eq.	1.56E+02	4.77E+00	6.93E+00	6.27E+00	1.39E+00	0.00E+00	-2.59E+00

## Huvudsakliga miljöpåverkansindikatorer: Produktgrupp 2 C25/30 S4 16

Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP-total	kg CO <sub>2</sub> eq.	1.70E+02	4.88E+00	7.10E+00	6.42E+00	1.42E+00	0.00E+00	-2.90E+00
GWP-fossil	kg CO <sub>2</sub> eq.	1.70E+02	4.78E+00	6.96E+00	6.29E+00	1.39E+00	0.00E+00	-2.88E+00
GWP-biogenic	kg CO <sub>2</sub> eq.	3.89E-01	6.02E-02	8.76E-02	7.92E-02	1.75E-02	0.00E+00	-2.68E-04
GWP-LULUC	kg CO <sub>2</sub> eq.	1.27E-01	3.96E-02	5.76E-02	5.21E-02	1.15E-02	0.00E+00	-2.16E-02
ODP	kg CFC11 eq.	4.23E-06	6.18E-16	8.98E-16	8.13E-16	1.80E-16	0.00E+00	-8.75E-15
AP	mol H <sup>+</sup> eq.	5.29E-01	2.78E-02	4.05E-02	3.66E-02	8.11E-03	0.00E+00	-1.59E-02
EP-freshwater	kg P eq.	1.17E-03	1.44E-05	2.09E-05	1.89E-05	4.18E-06	0.00E+00	-2.16E-05
EP-marine	kg N eq.	2.07E-01	1.36E-02	1.98E-02	1.79E-02	3.97E-03	0.00E+00	-7.54E-03
EP-terrestrial	mol N eq.	2.27E+00	1.51E-01	2.20E-01	1.99E-01	4.40E-02	0.00E+00	-8.15E-02
POCP	kg NMVOC eq.	5.26E-01	2.63E-02	3.82E-02	3.45E-02	7.65E-03	0.00E+00	-1.47E-02
ADP-M&M	kg Sb eq.	2.91E-04	3.68E-07	5.35E-07	4.84E-07	1.07E-07	0.00E+00	-5.12E-07
ADP-fossil	MJ	7.81E+02	6.44E+01	9.36E+01	8.47E+01	1.87E+01	0.00E+00	-6.78E+01
WDP	m <sup>3</sup>	1.99E+04	4.20E-02	6.11E-02	5.52E-02	1.22E-02	0.00E+00	-2.68E+01

**GWP-total:** Global Warming Potential; **GWP-fossil:** Global Warming Potential fossil fuels; **GWP-biogenic:** Global Warming Potential biogenic; **GWP-LULUC:** Global Warming Potential land use and land use change; **ODP:** Depletion potential of the stratospheric ozone layer; **AP:** Acidification potential, Accumulated Exceedance; **EP-freshwater:** Eutrophication potential, fraction of nutrients reaching freshwater end compartment; See "additional requirements" for indicator given as PO<sub>4</sub> eq. **EP-marine:** Eutrophication potential, fraction of nutrients reaching freshwater end compartment; **EP-terrestrial:** Eutrophication potential, Accumulated Exceedance; **POCP:** Formation potential of tropospheric ozone; **ADP-M&M:** Abiotic depletion potential for non-fossil resources (minerals and metals); **ADP-fossil:** Abiotic depletion potential for fossil resources; **WDP:** Water deprivation potential, deprivation weighted water consumption

## Övriga miljöpåverkansindikatorer: Produktgrupp 2 C25/30 S4 16

Indikator	Unit	A1-A3	A4	C1	C2	C3	C4	D
PM	Disease incidence	2.55E-06	9.71E-08	1.41E-07	1.28E-07	2.83E-08	0.00E+00	-6.64E-08
IRP	kBq U235 eq.	5.18E+00	1.12E-02	1.62E-02	1.47E-02	3.25E-03	0.00E+00	-1.48E+00
ETP-fw	CTUe	6.78E+02	4.65E+01	6.76E+01	6.12E+01	1.35E+01	0.00E+00	-4.20E+01
HTP-c	CTUh	2.12E-08	9.39E-10	1.37E-09	1.24E-09	2.73E-10	0.00E+00	-1.25E-09
HTP-nc	CTUh	3.90E-07	5.22E-08	7.59E-08	6.86E-08	1.52E-08	0.00E+00	-4.58E-08
SQP	Dimensionless	5.11E+02	2.21E+01	3.21E+01	2.91E+01	6.44E+00	0.00E+00	-1.84E+02

**PM:** Particulate matter emissions; **IRP:** Ionising radiation, human health; **ETP-fw:** Ecotoxicity (freshwater); **ETP-c:** Human toxicity, cancer effects; **HTP-nc:** Human toxicity, non-cancer effects; **SQP:** Land use related impacts / soil quality

## Resource use: Produktgrupp 2 C25/30 S4 16

Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
RPEE	MJ	1.83E+02	3.59E+00	5.22E+00	4.72E+00	1.05E+00	0.00E+00	-3.65E+01
RPEM	MJ	1.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TPE	MJ	1.83E+02	3.59E+00	5.22E+00	4.72E+00	1.05E+00	0.00E+00	-3.65E+01
NRPE	MJ	7.77E+02	6.45E+01	9.37E+01	8.48E+01	1.88E+01	0.00E+00	-6.80E+01
NRPM	MJ	7.40E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TRPE	MJ	7.85E+02	6.45E+01	9.37E+01	8.48E+01	1.88E+01	0.00E+00	-6.80E+01
SM	kg	3.74E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	9.04E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	5.39E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
W	m <sup>3</sup>	1.03E+00	4.11E-03	5.98E-03	5.41E-03	1.20E-03	0.00E+00	-6.74E-01

**RPEE:** Renewable primary energy resources used as energy carrier; **RPEM:** Renewable primary energy resources used as raw materials; **TPE:** Total use of renewable primary energy resources; **NRPE:** Non renewable primary energy resources used as energy carrier; **NRPM:** Non renewable primary energy resources used as materials; **TRPE:** Total use of non renewable primary energy resources; **SM:** Use of secondary materials; **RSF:** Use of renewable secondary fuels; **NRSF:** Use of non renewable secondary fuels; **W:** Use of net fresh water

## Slutskede – Avfall: Produktgrupp 2 C25/30 S4 16

Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
HW	KG	3.63E-02	3.25E-09	4.72E-09	4.27E-09	9.46E-10	0.00E+00	-1.83E-08
NHW	KG	3.38E+00	9.58E-03	1.39E-02	1.26E-02	2.79E-03	0.00E+00	-2.82E-02
RW	KG	3.34E-02	7.80E-05	1.13E-04	1.03E-04	2.27E-05	0.00E+00	-1.27E-02

**HW:** Hazardous waste disposed; **NHW:** Non hazardous waste disposed; **RW:** Radioactive waste disposed

### Slutskede – Utflöde: Produktgrupp 2 C25/30 S4 16

Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
CR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MR	kg	1.19E-03	0.00E+00	0.00E+00	0.00E+00	2.32E+03	0.00E+00	0.00E+00
MER	kg	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	9.39E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ETE	MJ	1.42E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**CR:** Components for reuse; **MR:** Materials for recycling; **MER:** Materials for energy recovery; **EEE:** Exported electric energy; **ETE:** Exported thermal energy

Läsexempel:  $9,0 \text{ E-03} = 9,0 \cdot 10^{-3} = 0,009$

Indikator	Enhet	A1-A3	A4	C1	C2	C3	C4	D
GWP-IOBC	kg CO <sub>2</sub> eq.	1.70E+02	4.73E+00	6.88E+00	6.22E+00	1.38E+00	0.00E+00	-2.84E+00

### Huvudsakliga miljöpåverkansindikatorer: Produktgrupp 3 C32/40 S5 16 0,55

Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP-total	kg CO <sub>2</sub> eq.	2.02E+02	4.85E+00	7.14E+00	6.37E+00	1.43E+00	0.00E+00	-2.79E+00
GWP-fossil	kg CO <sub>2</sub> eq.	2.01E+02	4.75E+00	7.00E+00	6.24E+00	1.40E+00	0.00E+00	-2.77E+00
GWP-biogenic	kg CO <sub>2</sub> eq.	4.63E-01	5.98E-02	8.81E-02	7.86E-02	1.76E-02	0.00E+00	-2.58E-04
GWP-LULUC	kg CO <sub>2</sub> eq.	1.37E-01	3.93E-02	5.79E-02	5.17E-02	1.16E-02	0.00E+00	-2.07E-02
ODP	kg CFC11 eq.	5.06E-06	6.13E-16	9.04E-16	8.06E-16	1.81E-16	0.00E+00	-8.41E-15
AP	mol H <sup>+</sup> eq.	6.21E-01	2.76E-02	4.07E-02	3.63E-02	8.16E-03	0.00E+00	-1.52E-02
EP-freshwater	kg P eq.	1.39E-03	1.42E-05	2.10E-05	1.87E-05	4.21E-06	0.00E+00	-2.07E-05
EP-marine	kg N eq.	2.43E-01	1.35E-02	2.00E-02	1.78E-02	4.00E-03	0.00E+00	-7.25E-03
EP-terrestrial	mol N eq.	2.66E+00	1.50E-01	2.21E-01	1.97E-01	4.42E-02	0.00E+00	-7.83E-02
POCP	kg NMVOC eq.	6.19E-01	2.61E-02	3.84E-02	3.43E-02	7.69E-03	0.00E+00	-1.41E-02
ADP-M&M	kg Sb eq.	3.48E-04	3.65E-07	5.39E-07	4.81E-07	1.08E-07	0.00E+00	-4.92E-07
ADP-fossil	MJ	8.97E+02	6.39E+01	9.42E+01	8.40E+01	1.89E+01	0.00E+00	-6.51E+01
WDP	m <sup>3</sup>	2.38E+04	4.17E-02	6.14E-02	5.48E-02	1.23E-02	0.00E+00	-2.58E+01

**GWP-total:** Global Warming Potential; **GWP-fossil:** Global Warming Potential fossil fuels; **GWP-biogenic:** Global Warming Potential biogenic; **GWP-LULUC:** Global Warming Potential land use and land use change; **ODP:** Depletion potential of the stratospheric ozone layer; **AP:** Acidification potential, Accumulated Exceedance; **EP-freshwater:** Eutrophication potential, fraction of nutrients reaching freshwater end compartment; See "additional requirements" for indicator given as PO<sub>4</sub> eq. **EP-marine:** Eutrophication potential, fraction of nutrients reaching freshwater end compartment; **EP-terrestrial:** Eutrophication potential, Accumulated Exceedance; **POCP:** Formation potential of tropospheric ozone; **ADP-M&M:** Abiotic depletion potential for non-fossil resources (minerals and metals); **ADP-fossil:** Abiotic depletion potential for fossil resources; **WDP:** Water deprivation potential, deprivation weighted water consumption

## Övriga miljöpåverkansindikatorer: Produktgrupp 3 C32/40 S5 16 0,55

Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
PM	Disease incidence	3.00E-06	9.64E-08	1.42E-07	1.27E-07	2.84E-08	0.00E+00	-6.37E-08
IRP	kBq U235 eq.	5.40E+00	1.11E-02	1.63E-02	1.46E-02	3.27E-03	0.00E+00	-1.42E+00
ETP-fw	CTUe	7.78E+02	4.62E+01	6.80E+01	6.07E+01	1.36E+01	0.00E+00	-4.03E+01
HTP-c	CTUh	2.45E-08	9.32E-10	1.37E-09	1.23E-09	2.75E-10	0.00E+00	-1.20E-09
HTP-nc	CTUh	4.33E-07	5.18E-08	7.63E-08	6.81E-08	1.53E-08	0.00E+00	-4.40E-08
SQP	Dimensionless	5.57E+02	2.19E+01	3.23E+01	2.89E+01	6.48E+00	0.00E+00	-1.77E+02

**PM:** Particulate matter emissions; **IRP:** Ionising radiation, human health; **ETP-fw:** Ecotoxicity (freshwater); **ETP-c:** Human toxicity, cancer effects; **HTP-nc:** Human toxicity, non-cancer effects; **SQP:** Land use related impacts / soil quality

## Resource use: Produktgrupp 3 C32/40 S5 16 0,55

Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
RPEE	MJ	2.01E+02	3.57E+00	5.26E+00	4.69E+00	1.05E+00	0.00E+00	-3.51E+01
RPEM	MJ	2.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TPE	MJ	2.01E+02	3.57E+00	5.26E+00	4.69E+00	1.05E+00	0.00E+00	-3.51E+01
NRPE	MJ	8.90E+02	6.40E+01	9.43E+01	8.41E+01	1.89E+01	0.00E+00	-6.53E+01
NRPM	MJ	1.13E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TRPE	MJ	9.01E+02	6.40E+01	9.43E+01	8.41E+01	1.89E+01	0.00E+00	-6.53E+01
SM	kg	4.50E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	1.08E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	6.44E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
W	m <sup>3</sup>	1.00E+00	4.08E-03	6.02E-03	5.37E-03	1.20E-03	0.00E+00	-6.47E-01

**RPEE:** Renewable primary energy resources used as energy carrier; **RPEM:** Renewable primary energy resources used as raw materials; **TPE:** Total use of renewable primary energy resources; **NRPE:** Non renewable primary energy resources used as energy carrier; **NRPM:** Non renewable primary energy resources used as materials; **TRPE:** Total use of non renewable primary energy resources; **SM:** Use of secondary materials; **RSF:** Use of renewable secondary fuels; **NRSF:** Use of non renewable secondary fuels; **W:** Use of net fresh water

## Slutskede - Avfall: Produktgrupp 3 C32/40 S5 16 0,55

Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
HW	KG	4.34E-02	3.22E-09	4.75E-09	4.24E-09	9.51E-10	0.00E+00	-1.75E-08
NHW	KG	4.03E+00	9.50E-03	1.40E-02	1.25E-02	2.80E-03	0.00E+00	-2.71E-02
RW	KG	3.33E-02	7.74E-05	1.14E-04	1.02E-04	2.28E-05	0.00E+00	-1.22E-02

**HW:** Hazardous waste disposed; **NHW:** Non hazardous waste disposed; **RW:** Radioactive waste disposed

### Slutskede – Utflöde: Produktgrupp 3 C32/40 S5 16 0,55

Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
CR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MR	kg	1.42E-03	0.00E+00	0.00E+00	0.00E+00	2.30E+03	0.00E+00	0.00E+00
MER	kg	2.51E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	1.12E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ETE	MJ	1.70E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**CR:** Components for reuse; **MR:** Materials for recycling; **MER:** Materials for energy recovery; **EEE:** Exported electric energy; **ETE:** Exported thermal energy

Läsexempel:  $9,0 \text{ E-03} = 9,0 \cdot 10^{-3} = 0,009$

Indikator	Enhet	A1-A3	A4	C1	C2	C3	C4	D
GWP-IOBC	kg CO <sub>2</sub> eq.	2.01E+02	4.70E+00	6.92E+00	6.18E+00	1.39E+00	0.00E+00	-2.73E+00

### Huvudsakliga miljöpåverkansindikatorer: Produktgrupp 4 C45/55 S5 16 0,40

Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP-total	kg CO <sub>2</sub> eq.	2.64E+02	4.92E+00	7.19E+00	6.47E+00	1.44E+00	0.00E+00	-2.82E+00
GWP-fossil	kg CO <sub>2</sub> eq.	2.63E+02	4.82E+00	7.05E+00	6.34E+00	1.41E+00	0.00E+00	-2.80E+00
GWP-biogenic	kg CO <sub>2</sub> eq.	6.95E-01	6.07E-02	8.87E-02	7.98E-02	1.77E-02	0.00E+00	-2.60E-04
GWP-LULUC	kg CO <sub>2</sub> eq.	1.59E-01	3.99E-02	5.83E-02	5.25E-02	1.17E-02	0.00E+00	-2.09E-02
ODP	kg CFC11 eq.	6.55E-06	6.23E-16	9.10E-16	8.19E-16	1.82E-16	0.00E+00	-8.49E-15
AP	mol H <sup>+</sup> eq.	7.96E-01	2.81E-02	4.10E-02	3.69E-02	8.21E-03	0.00E+00	-1.54E-02
EP-freshwater	kg P eq.	1.74E-03	1.45E-05	2.12E-05	1.90E-05	4.23E-06	0.00E+00	-2.09E-05
EP-marine	kg N eq.	3.14E-01	1.37E-02	2.01E-02	1.81E-02	4.02E-03	0.00E+00	-7.32E-03
EP-terrestrial	mol N eq.	3.38E+00	1.52E-01	2.22E-01	2.00E-01	4.45E-02	0.00E+00	-7.91E-02
POCP	kg NMVOC eq.	7.94E-01	2.65E-02	3.87E-02	3.48E-02	7.74E-03	0.00E+00	-1.43E-02
ADP-M&M	kg Sb eq.	4.51E-04	3.71E-07	5.42E-07	4.88E-07	1.08E-07	0.00E+00	-4.97E-07
ADP-fossil	MJ	1.19E+03	6.49E+01	9.48E+01	8.53E+01	1.90E+01	0.00E+00	-6.58E+01
WDP	m <sup>3</sup>	3.10E+04	4.23E-02	6.19E-02	5.57E-02	1.24E-02	0.00E+00	-2.60E+01

**GWP-total:** Global Warming Potential; **GWP-fossil:** Global Warming Potential fossil fuels; **GWP-biogenic:** Global Warming Potential biogenic; **GWP-LULUC:** Global Warming Potential land use and land use change; **ODP:** Depletion potential of the stratospheric ozone layer; **AP:** Acidification potential, Accumulated Exceedance; **EP-freshwater:** Eutrophication potential, fraction of nutrients reaching freshwater end compartment; See "additional requirements" for indicator given as PO<sub>4</sub> eq. **EP-marine:** Eutrophication potential, fraction of nutrients reaching freshwater end compartment; **EP-terrestrial:** Eutrophication potential, Accumulated Exceedance; **POCP:** Formation potential of tropospheric ozone; **ADP-M&M:** Abiotic depletion potential for non-fossil resources (minerals and metals); **ADP-fossil:** Abiotic depletion potential for fossil resources; **WDP:** Water deprivation potential, deprivation weighted water consumption

## Övriga miljöpåverkansindikatorer: Produktgrupp 4 C45/55 S5 16 0,40

Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
PM	Disease incidence	3.84E-06	9.79E-08	1.43E-07	1.29E-07	2.86E-08	0.00E+00	-6.44E-08
IRP	kBq U235 eq.	5.92E+00	1.13E-02	1.64E-02	1.48E-02	3.29E-03	0.00E+00	-1.43E+00
ETP-fw	CTUe	9.67E+02	4.69E+01	6.85E+01	6.17E+01	1.37E+01	0.00E+00	-4.07E+01
HTP-c	CTUh	3.07E-08	9.47E-10	1.38E-09	1.25E-09	2.77E-10	0.00E+00	-1.21E-09
HTP-nc	CTUh	5.19E-07	5.26E-08	7.69E-08	6.92E-08	1.54E-08	0.00E+00	-4.44E-08
SQP	Dimensionless	6.58E+02	2.23E+01	3.26E+01	2.93E+01	6.51E+00	0.00E+00	-1.78E+02

**PM:** Particulate matter emissions; **IRP:** Ionising radiation, human health; **ETP-fw:** Ecotoxicity (freshwater); **ETP-c:** Human toxicity, cancer effects; **HTP-nc:** Human toxicity, non-cancer effects; **SQP:** Land use related impacts / soil quality

## Resource use: Produktgrupp 4 C45/55 S5 16 0,40

Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
RPEE	MJ	2.41E+02	3.62E+00	5.29E+00	4.76E+00	1.06E+00	0.00E+00	-3.54E+01
RPEM	MJ	6.88E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TPE	MJ	2.41E+02	3.62E+00	5.29E+00	4.76E+00	1.06E+00	0.00E+00	-3.54E+01
NRPE	MJ	1.16E+03	6.50E+01	9.50E+01	8.55E+01	1.90E+01	0.00E+00	-6.59E+01
NRPM	MJ	3.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TRPE	MJ	1.19E+03	6.50E+01	9.50E+01	8.55E+01	1.90E+01	0.00E+00	-6.59E+01
SM	kg	4.91E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	1.41E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	8.37E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
W	m <sup>3</sup>	1.04E+00	4.15E-03	6.06E-03	5.45E-03	1.21E-03	0.00E+00	-6.54E-01

**RPEE:** Renewable primary energy resources used as energy carrier; **RPEM:** Renewable primary energy resources used as raw materials; **TPE:** Total use of renewable primary energy resources; **NRPE:** Non renewable primary energy resources used as energy carrier; **NRPM:** Non renewable primary energy resources used as materials; **TRPE:** Total use of non renewable primary energy resources; **SM:** Use of secondary materials; **RSF:** Use of renewable secondary fuels; **NRSF:** Use of non renewable secondary fuels; **W:** Use of net fresh water

## Slutskede – Avfall: Produktgrupp 4 C45/55 S5 16 0,40

Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
HW	KG	5.64E-02	3.27E-09	4.79E-09	4.31E-09	9.57E-10	0.00E+00	-1.77E-08
NHW	KG	5.29E+00	9.65E-03	1.41E-02	1.27E-02	2.82E-03	0.00E+00	-2.74E-02
RW	KG	3.63E-02	7.86E-05	1.15E-04	1.03E-04	2.30E-05	0.00E+00	-1.24E-02

**HW:** Hazardous waste disposed; **NHW:** Non hazardous waste disposed; **RW:** Radioactive waste disposed

## Slutskede – Utflöde: Produktgrupp 4 C45/55 S5 16 0,40

Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
CR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MR	kg	1.85E-03	0.00E+00	0.00E+00	0.00E+00	2.34E+03	0.00E+00	0.00E+00
MER	kg	2.51E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	1.46E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ETE	MJ	2.21E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**CR:** Components for reuse; **MR:** Materials for recycling; **MER:** Materials for energy recovery; **EEE:** Exported electric energy; **ETE:** Exported thermal energy

Läsexempel:  $9,0 \text{ E-03} = 9,0 \cdot 10^{-3} = 0,009$

Indikator	Enhet	A1-A3	A4	C1	C2	C3	C4	D
GWP-IOBC	kg CO2 eq.	2.63E+02	4.79E+00	6.97E+00	6.27E+00	1.39E+00	0.00E+00	-2.76E+00

## Huvudsakliga miljöpåverkansindikatorer: Produktgrupp 5 C35/45 S4 16 0,40 Frysfrys Inf

Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP-total	kg CO2 eq.	2.94E+02	4.88E+00	7.19E+00	6.42E+00	1.44E+00	0.00E+00	-2.74E+00
GWP-fossil	kg CO2 eq.	2.94E+02	4.78E+00	7.04E+00	6.29E+00	1.41E+00	0.00E+00	-2.72E+00
GWP-biogenic	kg CO2 eq.	6.20E-01	6.02E-02	8.86E-02	7.92E-02	1.77E-02	0.00E+00	-2.53E-04
GWP-LULUC	kg CO2 eq.	2.75E-01	3.96E-02	5.83E-02	5.21E-02	1.17E-02	0.00E+00	-2.03E-02
ODP	kg CFC11 eq.	5.79E-06	6.18E-16	9.09E-16	8.13E-16	1.82E-16	0.00E+00	-8.25E-15
AP	mol H <sup>+</sup> eq.	8.57E-01	2.79E-02	4.10E-02	3.66E-02	8.21E-03	0.00E+00	-1.49E-02
EP-freshwater	kg P eq.	1.90E-03	1.44E-05	2.11E-05	1.89E-05	4.23E-06	0.00E+00	-2.03E-05
EP-marine	kg N eq.	3.54E-01	1.36E-02	2.01E-02	1.79E-02	4.02E-03	0.00E+00	-7.11E-03
EP-terrestrial	mol N eq.	2.07E+00	1.51E-01	2.22E-01	1.99E-01	4.45E-02	0.00E+00	-7.68E-02
POCP	kg NMVOC eq.	8.94E-01	2.63E-02	3.86E-02	3.45E-02	7.74E-03	0.00E+00	-1.39E-02
ADP-M&M	kg Sb eq.	2.13E-04	3.68E-07	5.42E-07	4.84E-07	1.08E-07	0.00E+00	-4.83E-07
ADP-fossil	MJ	1.19E+03	6.44E+01	9.47E+01	8.47E+01	1.90E+01	0.00E+00	-6.39E+01
WDP	m <sup>3</sup>	2.83E+04	4.20E-02	6.18E-02	5.52E-02	1.24E-02	0.00E+00	-2.53E+01

**GWP-total:** Global Warming Potential; **GWP-fossil:** Global Warming Potential fossil fuels; **GWP-biogenic:** Global Warming Potential biogenic; **GWP-LULUC:** Global Warming Potential land use and land use change; **ODP:** Depletion potential of the stratospheric ozone layer; **AP:** Acidification potential, Accumulated Exceedance; **EP-freshwater:** Eutrophication potential, fraction of nutrients reaching freshwater end compartment; See "additional requirements" for indicator given as PO4 eq. **EP-marine:** Eutrophication potential, fraction of nutrients reaching freshwater end compartment; **EP-terrestrial:** Eutrophication potential, Accumulated Exceedance; **POCP:** Formation potential of tropospheric ozone; **ADP-M&M:** Abiotic depletion potential for non-fossil resources (minerals and metals); **ADP-fossil:** Abiotic depletion potential for fossil resources; **WDP:** Water deprivation potential, deprivation weighted water consumption

## Övriga miljöpåverkansindikatorer: Produktgrupp 5 C35/45 S4 16 0,40 Frys Inf

Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
PM	Disease incidence	3.69E-06	9.71E-08	1.43E-07	1.28E-07	2.86E-08	0.00E+00	-6.26E-08
IRP	kBq U235 eq.	6.42E+00	1.12E-02	1.64E-02	1.47E-02	3.29E-03	0.00E+00	-1.39E+00
ETP-fw	CTUe	1.04E+03	4.65E+01	6.85E+01	6.12E+01	1.37E+01	0.00E+00	-3.96E+01
HTP-c	CTUh	2.82E-08	9.39E-10	1.38E-09	1.24E-09	2.77E-10	0.00E+00	-1.18E-09
HTP-nc	CTUh	6.30E-07	5.22E-08	7.68E-08	6.86E-08	1.54E-08	0.00E+00	-4.32E-08
SQP	Dimensionless	7.42E+02	2.21E+01	3.25E+01	2.91E+01	6.51E+00	0.00E+00	-1.73E+02

**PM:** Particulate matter emissions; **IRP:** Ionising radiation, human health; **ETP-fw:** Ecotoxicity (freshwater); **ETP-c:** Human toxicity, cancer effects; **HTP-nc:** Human toxicity, non-cancer effects; **SQP:** Land use related impacts / soil quality

## Resource use: Produktgrupp 5 C35/45 S4 16 0,40 Frys Inf

Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
RPEE	MJ	2.54E+02	3.59E+00	5.29E+00	4.72E+00	1.06E+00	0.00E+00	-3.44E+01
RPEM	MJ	8.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TPE	MJ	2.55E+02	3.59E+00	5.29E+00	4.72E+00	1.06E+00	0.00E+00	-3.44E+01
NRPE	MJ	1.16E+03	6.45E+01	9.49E+01	8.48E+01	1.90E+01	0.00E+00	-6.41E+01
NRPM	MJ	3.58E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TRPE	MJ	1.19E+03	6.45E+01	9.49E+01	8.48E+01	1.90E+01	0.00E+00	-6.41E+01
SM	kg	4.19E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	1.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	9.73E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
W	m <sup>3</sup>	1.12E+00	4.11E-03	6.05E-03	5.41E-03	1.21E-03	0.00E+00	-6.35E-01

**RPEE:** Renewable primary energy resources used as energy carrier; **RPEM:** Renewable primary energy resources used as raw materials; **TPE:** Total use of renewable primary energy resources; **NRPE:** Non renewable primary energy resources used as energy carrier; **NRPM:** Non renewable primary energy resources used as materials; **TRPE:** Total use of non renewable primary energy resources; **SM:** Use of secondary materials; **RSF:** Use of renewable secondary fuels; **NRSF:** Use of non renewable secondary fuels; **W:** Use of net fresh water

## Slutskede - Avfall: Produktgrupp 5 C35/45 S4 16 0,40 Frys Inf

Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
HW	KG	3.01E-02	3.25E-09	4.78E-09	4.27E-09	9.57E-10	0.00E+00	-1.72E-08
NHW	KG	3.74E+00	9.58E-03	1.41E-02	1.26E-02	2.82E-03	0.00E+00	-2.66E-02
RW	KG	4.29E-02	7.80E-05	1.15E-04	1.03E-04	2.30E-05	0.00E+00	-1.20E-02

**HW:** Hazardous waste disposed; **NHW:** Non hazardous waste disposed; **RW:** Radioactive waste disposed



### Slutskede – Utflöde: Produktgrupp 5 C35/45 S4 16 0,40 Frys Inf

Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
CR	kg	2.44E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MR	kg	2.64E-03	0.00E+00	0.00E+00	0.00E+00	2.32E+03	0.00E+00	0.00E+00
MER	kg	2.57E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	1.48E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ETE	MJ	2.24E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**CR:** Components for reuse; **MR:** Materials for recycling; **MER:** Materials for energy recovery; **EEE:** Exported electric energy; **ETE:** Exported thermal energy

Läsexempel:  $9,0 \text{ E-03} = 9,0 \cdot 10^{-3} = 0,009$

Indikator	Enhet	A1-A3	A4	C1	C2	C3	C4	D
GWP-IOBC	kg CO <sub>2</sub> eq.	2.94E+02	4.73E+00	6.96E+00	6.22E+00	1.39E+00	0.00E+00	-2.68E+00

### Huvudsakliga miljöpåverkansindikatorer: Produktgrupp 6 C45/55 S5 16 0,40 Inf

Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP-total	kg CO <sub>2</sub> eq.	3.73E+02	4.92E+00	7.25E+00	6.47E+00	1.45E+00	0.00E+00	-2.81E+00
GWP-fossil	kg CO <sub>2</sub> eq.	3.72E+02	4.82E+00	7.11E+00	6.34E+00	1.42E+00	0.00E+00	-2.79E+00
GWP-biogenic	kg CO <sub>2</sub> eq.	6.59E-01	6.07E-02	8.95E-02	7.98E-02	1.79E-02	0.00E+00	-2.60E-04
GWP-LULUC	kg CO <sub>2</sub> eq.	1.66E-01	3.99E-02	5.88E-02	5.25E-02	1.17E-02	0.00E+00	-2.09E-02
ODP	kg CFC11 eq.	7.60E-06	6.23E-16	9.18E-16	8.19E-16	1.83E-16	0.00E+00	-8.48E-15
AP	mol H <sup>+</sup> eq.	1.08E+00	2.81E-02	4.14E-02	3.69E-02	8.25E-03	0.00E+00	-1.54E-02
EP-freshwater	kg P eq.	2.22E-03	1.45E-05	2.13E-05	1.90E-05	4.26E-06	0.00E+00	-2.09E-05
EP-marine	kg N eq.	4.42E-01	1.37E-02	2.03E-02	1.81E-02	4.04E-03	0.00E+00	-7.31E-03
EP-terrestrial	mol N eq.	2.50E+00	1.52E-01	2.24E-01	2.00E-01	4.47E-02	0.00E+00	-7.89E-02
POCP	kg NMVOC eq.	1.14E+00	2.65E-02	3.90E-02	3.48E-02	7.78E-03	0.00E+00	-1.42E-02
ADP-M&M	kg Sb eq.	2.77E-04	3.71E-07	5.47E-07	4.88E-07	1.09E-07	0.00E+00	-4.96E-07
ADP-fossil	MJ	1.30E+03	6.49E+01	9.56E+01	8.53E+01	1.91E+01	0.00E+00	-6.56E+01
WDP	m <sup>3</sup>	3.72E+04	4.23E-02	6.24E-02	5.57E-02	1.24E-02	0.00E+00	-2.60E+01

**GWP-total:** Global Warming Potential; **GWP-fossil:** Global Warming Potential fossil fuels; **GWP-biogenic:** Global Warming Potential biogenic; **GWP-LULUC:** Global Warming Potential land use and land use change; **ODP:** Depletion potential of the stratospheric ozone layer; **AP:** Acidification potential, Accumulated Exceedance; **EP-freshwater:** Eutrophication potential, fraction of nutrients reaching freshwater end compartment; See "additional requirements" for indicator given as PO<sub>4</sub> eq. **EP-marine:** Eutrophication potential, fraction of nutrients reaching freshwater end compartment; **EP-terrestrial:** Eutrophication potential, Accumulated Exceedance; **POCP:** Formation potential of tropospheric ozone; **ADP-M&M:** Abiotic depletion potential for non-

fossil resources (minerals and metals); **ADP-fossil**: Abiotic depletion potential for fossil resources; **WDP**: Water deprivation potential, deprivation weighted water consumption

### Övriga miljöpåverkansindikatorer: Produktgrupp 6 C45/55 S5 16 0,40 Inf

Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
PM	Disease incidence	4.65E-06	9.79E-08	1.44E-07	1.29E-07	2.88E-08	0.00E+00	-6.43E-08
IRP	kBq U235 eq.	6.31E+00	1.13E-02	1.66E-02	1.48E-02	3.31E-03	0.00E+00	-1.43E+00
ETP-fw	CTUe	1.29E+03	4.69E+01	6.91E+01	6.17E+01	1.38E+01	0.00E+00	-4.06E+01
HTP-c	CTUh	3.42E-08	9.47E-10	1.40E-09	1.25E-09	2.78E-10	0.00E+00	-1.21E-09
HTP-nc	CTUh	5.24E-07	5.26E-08	7.75E-08	6.92E-08	1.55E-08	0.00E+00	-4.43E-08
SQP	Dimensionless	6.51E+02	2.23E+01	3.28E+01	2.93E+01	6.55E+00	0.00E+00	-1.78E+02

**PM**: Particulate matter emissions; **IRP**: Ionising radiation, human health; **ETP-fw**: Ecotoxicity (freshwater); **ETP-c**: Human toxicity, cancer effects; **HTP-nc**: Human toxicity, non-cancer effects; **SQP**: Land use related impacts / soil quality

### Resource use: Produktgrupp 6 C45/55 S5 16 0,40 Inf

Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
RPEE	MJ	2.63E+02	3.62E+00	5.34E+00	4.76E+00	1.06E+00	0.00E+00	-3.54E+01
RPEM	MJ	4.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TPE	MJ	2.63E+02	3.62E+00	5.34E+00	4.76E+00	1.06E+00	0.00E+00	-3.54E+01
NRPE	MJ	1.28E+03	6.50E+01	9.58E+01	8.54E+01	1.91E+01	0.00E+00	-6.58E+01
NRPM	MJ	2.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TRPE	MJ	1.31E+03	6.50E+01	9.58E+01	8.54E+01	1.91E+01	0.00E+00	-6.58E+01
SM	kg	3.94E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	2.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	1.28E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
W	m <sup>3</sup>	1.08E+00	4.14E-03	6.11E-03	5.45E-03	1.22E-03	0.00E+00	-6.52E-01

**RPEE**: Renewable primary energy resources used as energy carrier; **RPEM**: Renewable primary energy resources used as raw materials; **TPE**: Total use of renewable primary energy resources; **NRPE**: Non renewable primary energy resources used as energy carrier; **NRPM**: Non renewable primary energy resources used as materials; **TRPE**: Total use of non renewable primary energy resources; **SM**: Use of secondary materials; **RSF**: Use of renewable secondary fuels; **NRSF**: Use of non renewable secondary fuels; **W**: Use of net fresh water

### Slutskede - Avfall: Produktgrupp 6 C45/55 S5 16 0,40 Inf

Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
HW	KG	3.95E-02	3.27E-09	4.83E-09	4.31E-09	9.63E-10	0.00E+00	-1.77E-08
NHW	KG	4.65E+00	9.65E-03	1.42E-02	1.27E-02	2.84E-03	0.00E+00	-2.73E-02
RW	KG	3.52E-02	7.86E-05	1.16E-04	1.03E-04	2.31E-05	0.00E+00	-1.23E-02

**HW**: Hazardous waste disposed; **NHW**: Non hazardous waste disposed; **RW**: Radioactive waste disposed

### Slutskede – Utflöde: Produktgrupp 6 C45/55 S5 16 0,40 Inf

Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
CR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MR	kg	3.47E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	2.59E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	1.95E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ETE	MJ	2.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**CR:** Components for reuse; **MR:** Materials for recycling; **MER:** Materials for energy recovery; **EEE:** Exported electric energy; **ETE:** Exported thermal energy

Läsexempel:  $9,0 \text{ E-03} = 9,0 \cdot 10^{-3} = 0,009$

Indikator	Enhet	A1-A3	A4	C1	C2	C3	C4	D
GWP-IOBC	kg CO <sub>2</sub> eq.	3.73E+02	4.77E+00	7.03E+00	6.27E+00	1.40E+00	0.00E+00	-2.75E+00

### Huvudsakliga miljöpåverkansindikatorer: Produktgrupp 7 C35/45 S5 8 0,38 Inf Sprut 40 kg 4D stålfiber

Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP-total	kg CO <sub>2</sub> eq.	4.51E+02	4.82E+00	7.10E+00	6.34E+00	1.42E+00	0.00E+00	-2.32E+00
GWP-fossil	kg CO <sub>2</sub> eq.	4.50E+02	4.73E+00	6.96E+00	6.21E+00	1.39E+00	0.00E+00	-2.31E+00
GWP-biogenic	kg CO <sub>2</sub> eq.	9.58E-01	5.95E-02	8.76E-02	7.82E-02	1.75E-02	0.00E+00	-2.15E-04
GWP-LULUC	kg CO <sub>2</sub> eq.	2.57E-01	3.91E-02	5.76E-02	5.14E-02	1.15E-02	0.00E+00	-1.73E-02
ODP	kg CFC11 eq.	8.13E-06	6.10E-16	8.98E-16	8.03E-16	1.80E-16	0.00E+00	-7.00E-15
AP	mol H <sup>+</sup> eq.	1.38E+00	2.75E-02	4.05E-02	3.62E-02	8.11E-03	0.00E+00	-1.27E-02
EP-freshwater	kg P eq.	2.59E-03	1.42E-05	2.09E-05	1.87E-05	4.18E-06	0.00E+00	-1.73E-05
EP-marine	kg N eq.	5.30E-01	1.35E-02	1.98E-02	1.77E-02	3.97E-03	0.00E+00	-6.03E-03
EP-terrestrial	mol N eq.	3.25E+00	1.49E-01	2.20E-01	1.96E-01	4.40E-02	0.00E+00	-6.52E-02
POCP	kg NMVOC eq.	1.35E+00	2.59E-02	3.82E-02	3.41E-02	7.65E-03	0.00E+00	-1.18E-02
ADP-M&M	kg Sb eq.	1.06E-03	3.64E-07	5.35E-07	4.78E-07	1.07E-07	0.00E+00	-4.10E-07
ADP-fossil	MJ	2.15E+03	6.36E+01	9.36E+01	8.36E+01	1.87E+01	0.00E+00	-5.42E+01
WDP	m <sup>3</sup>	3.96E+04	4.15E-02	6.11E-02	5.46E-02	1.22E-02	0.00E+00	-2.15E+01

**GWP-total:** Global Warming Potential; **GWP-fossil:** Global Warming Potential fossil fuels; **GWP-biogenic:** Global Warming Potential biogenic; **GWP-LULUC:** Global Warming Potential land use and land use change; **ODP:** Depletion potential of the stratospheric ozone layer; **AP:** Acidification potential, Accumulated Exceedance; **EP-freshwater:** Eutrophication potential, fraction of nutrients reaching freshwater end compartment; See "additional requirements" for indicator given as PO<sub>4</sub> eq. **EP-marine:** Eutrophication potential, fraction of nutrients reaching freshwater end compartment; **EP-terrestrial:** Eutrophication potential, Accumulated Exceedance; **POCP:** Formation potential of tropospheric ozone; **ADP-M&M:** Abiotic depletion potential for non-

fossil resources (minerals and metals); **ADP-fossil**: Abiotic depletion potential for fossil resources; **WDP**: Water deprivation potential, deprivation weighted water consumption

### Övriga miljöpåverkansindikatorer: Produktgrupp 7 C35/45 S5 8 0,38 Inf Sprut 40 kg 4D stålfiber

Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
PM	Disease incidence	7.39E-06	9.59E-08	1.41E-07	1.26E-07	2.83E-08	0.00E+00	-5.31E-08
IRP	kBq U235 eq.	9.71E+00	1.10E-02	1.62E-02	1.45E-02	3.25E-03	0.00E+00	-1.18E+00
ETP-fw	CTUe	1.61E+03	4.60E+01	6.76E+01	6.04E+01	1.35E+01	0.00E+00	-3.36E+01
HTP-c	CTUh	4.54E-08	9.28E-10	1.37E-09	1.22E-09	2.73E-10	0.00E+00	-9.99E-10
HTP-nc	CTUh	1.26E-06	5.15E-08	7.59E-08	6.78E-08	1.52E-08	0.00E+00	-3.66E-08
SQP	Dimensionless	7.77E+02	2.18E+01	3.21E+01	2.87E+01	6.44E+00	0.00E+00	-1.47E+02

**PM**: Particulate matter emissions; **IRP**: Ionising radiation, human health; **ETP-fw**: Ecotoxicity (freshwater); **ETP-c**: Human toxicity, cancer effects; **HTP-nc**: Human toxicity, non-cancer effects; **SQP**: Land use related impacts / soil quality

### Resource use: Produktgrupp 7 C35/45 S5 8 0,38 Inf Sprut 40 kg 4D stålfiber

Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
RPEE	MJ	4.41E+02	3.55E+00	5.22E+00	4.67E+00	1.05E+00	0.00E+00	-2.92E+01
RPEM	MJ	9.15E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TPE	MJ	4.42E+02	3.55E+00	5.22E+00	4.67E+00	1.05E+00	0.00E+00	-2.92E+01
NRPE	MJ	2.11E+03	6.37E+01	9.37E+01	8.37E+01	1.88E+01	0.00E+00	-5.44E+01
NRPM	MJ	4.52E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TRPE	MJ	2.15E+03	6.37E+01	9.37E+01	8.37E+01	1.88E+01	0.00E+00	-5.44E+01
SM	kg	6.55E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	2.25E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	1.36E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
W	m <sup>3</sup>	1.20E+00	4.06E-03	5.98E-03	5.34E-03	1.20E-03	0.00E+00	-5.39E-01

**RPEE**: Renewable primary energy resources used as energy carrier; **RPEM**: Renewable primary energy resources used as raw materials; **TPE**: Total use of renewable primary energy resources; **NRPE**: Non renewable primary energy resources used as energy carrier; **NRPM**: Non renewable primary energy resources used as materials; **TRPE**: Total use of non renewable primary energy resources; **SM**: Use of secondary materials; **RSF**: Use of renewable secondary fuels; **NRSF**: Use of non renewable secondary fuels; **W**: Use of net fresh water

### Slutskede - Avfall: Produktgrupp 7 C35/45 S5 8 0,38 Inf Sprut 40 kg 4D stålfiber

Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
HW	KG	4.20E-02	3.21E-09	4.72E-09	4.22E-09	9.46E-10	0.00E+00	-1.46E-08
NHW	KG	2.13E+01	9.46E-03	1.39E-02	1.24E-02	2.79E-03	0.00E+00	-2.26E-02
RW	KG	3.80E-02	7.70E-05	1.13E-04	1.01E-04	2.27E-05	0.00E+00	-1.02E-02

**HW**: Hazardous waste disposed; **NHW**: Non hazardous waste disposed; **RW**: Radioactive waste disposed

## Slutskede – Utflöde: Produktgrupp 7 C35/45 S5 8 0,38 Inf Sprut 40 kg 4D stålfiber

Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
CR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MR	kg	3.69E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	2.59E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	2.07E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ETE	MJ	3.14E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**CR:** Components for reuse; **MR:** Materials for recycling; **MER:** Materials for energy recovery; **EEE:** Exported electric energy; **ETE:** Exported thermal energy

Läsexempel:  $9,0 \text{ E-03} = 9,0 \cdot 10^{-3} = 0,009$

Indikator	Enhet	A1-A3	A4	C1	C2	C3	C4	D
GWP-IOBC	kg CO2 eq.	4.50E+02	4.67E+00	6.88E+00	6.15E+00	1.38E+00	0.00E+00	-2.27E+00

## Summering Produktgrupp 1-7: GWP-IOBC A1-A3

Indikator	Enhet	Grupp 1 C25/30 S4 16 Miljö	Grupp 2 C25/30 S4 16	Grupp 3 C32/40 S5 16 0,55	Grupp 4 C45/55 S5 16 0,40	Grupp 5 C35/45 S4 16 0,40 Frys Inf	Grupp 6 C45/55 S5 16 0,40 Inf	Grupp 7 C35/45 S5 8 0,38 Inf Sprut 40 kg 4D stålfiber
GWP-IOBC A1-A3	kg CO2 eq.	1.56E+02	1.70E+02	2.01E+02	2.63E+02	2.94E+02	3.73E+02	4.50E+02

**GWP-IOBC** Global warming potential calculated according to the principle of instantaneous oxidation. In this indicator uptake and emission of biogenic carbon dioxide is set to zero, i.e. directly balanced out in the module where it appears. Alternative name of this indicator is GWP-GHG.

## Information som beskriver innehåll av biogent kol vid fabriksgrinden: Produktgrupp 1- 7

Innehåll av biogent kol	Enhet	Värde
Innehåll av biogent kol i produkt	kg C	-
Innehåll av biogent kol i förpackning	kg C	-

## Klassificering av disclaimer för deklaration av huvudsakliga och övriga miljöpåverkansindikatorer

ILCD classification	Indicator	Disclaimer
ILCD type / level 1	Global warming potential (GWP)	None
	Depletion potential of the stratospheric ozone layer (ODP)	None
	Potential incidence of disease due to PM emissions (PM)	None
ILCD type / level 2	Acidification potential, Accumulated Exceedance (AP)	None
	Eutrophication potential, Fraction of nutrients reaching marine end compartment (EP-marine)	None
	Eutrophication potential, Accumulated Exceedance (EP-terrestrial)	None

	Formation potential of tropospheric ozone (POCP)	None
	Potential Human exposure efficiency relative to U235 (IRP)	1
ILCD type / level 3	Abiotic depletion potential for non-fossil resources (ADP-minerals&metals)	2
	Abiotic depletion potential for fossil resources (ADP-fossil)	2
	Water (user) deprivation potential, deprivation-weighted water consumption (WDP)	2
	Potential Comparative Toxic Unit for ecosystems (ETP-fw)	2
	Potential Comparative Toxic Unit for humans (HTP-c)	2
	Potential Comparative Toxic Unit for humans (HTP-nc)	2
	Potential Soil quality index (SQP)	2
<p><b>Disclaimer 1</b> – 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.</p> <p><b>Disclaimer 2</b> – 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</p>		

Innehåll av biogent kol	Enhet	Värde
Innehåll av biogent kol i produkt	kg C	-
Innehåll av biogent kol i förpackning	kg C	-

## Norska tilläggskrav

### Klimatpåverkan från användning av elektricitet i tillverkningskedet (A3)

Nationell produktionsmix från import, lågspänning (produktion av transmissionsledningar, utöver direkta utsläpp och förluster i elnätet) av tillförd el för tillverkningsprocessen (A3).

Nationell elnätmix	Datakälla	GWP tot [kg CO <sub>2</sub> -eq/kWh]
Svensk Elmix	Sphera	0.042

### Ytterligare miljöpåverkansindikatorer som krävs i NPCR Del A för byggprodukter

För att öka transparensen av det biogena kolets bidrag till klimatpåverkan redovisas indikatorn GWP-IOBC. Denna indikator exkluderar biogent koldioxid och benämns ibland även som GWP-GHG. Tabellen nedan visar indikator GWP-IOBC [enhet kg CO<sub>2</sub> eq.]

Grupp	A1-A3	A4	C1	C2	C3	C4	D
C25/30 S4 16 Miljö	1.56E+02	4.77E+00	6.93E+00	6.27E+00	1.39E+00	0.00E+00	-2.59E+00
C25/30 S4 16	1.70E+02	4.73E+00	6.88E+00	6.22E+00	1.38E+00	0.00E+00	-2.84E+00
C32/40 S5 16 0,55	2.01E+02	4.70E+00	6.92E+00	6.18E+00	1.39E+00	0.00E+00	-2.73E+00
C45/55 S5 16 0,40	2.63E+02	4.79E+00	6.97E+00	6.27E+00	1.39E+00	0.00E+00	-2.76E+00
C35/45 S4 16 0,40 Frys Inf	2.94E+02	4.73E+00	6.96E+00	6.22E+00	1.39E+00	0.00E+00	-2.68E+00
C45/55 S5 16 0,40 Inf	3.73E+02	4.77E+00	7.03E+00	6.27E+00	1.40E+00	0.00E+00	-2.75E+00
C35/45 S5 8 0,38 Inf Sprut 40 kg 4D stålfiber	4.50E+02	4.67E+00	6.88E+00	6.15E+00	1.38E+00	0.00E+00	-2.27E+00

**GWP-IOBC** Global warming potential calculated according to the principle of instantaneous oxidation. In this indicator uptake and emission of biogenic carbon dioxide is set to zero, i.e. directly balanced out in the module where it appears. Alternative name of this indicator is GWP-GHG.

## Farliga ämnen

Deklarationen är baserad på hänvisning till tröskelvärden och/eller testresultat och/eller säkerhetsdatablad som tillhandahålls EPD-verifierare. Dokumentation är tillgänglig på begäran till EPD-ägaren.

- Produkten innehåller inga ämnen från REACH Kandidatlista eller den norska prioritetslistan.
- Produkten innehåller ämnen som är under 0,1 vikt-% på REACH Kandidatlista.
- Produktet innehåller ämnen, mer än 0,1 vikt-%, från REACH Kandidatlista eller den norska prioritetslistan, se tabell nedan.
- Produktet innehåller inga ämnen på REACH Kandidatlista eller den norska prioritetslistan. Produkten kan karakteriseras som farlig avfall (enligt norska "Avfallsforskriften, Vedlegg III"), se tabell nedan.

## Inomhusmiljö

Produkten uppfyller kraven för låga emissioner.

## Carbon footprint

Carbon footprint har inte utarbetats för produkten.



## Bibliografi

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