Environmental Profile

This LCA is calculated according to: ISO 14044, ISO 14040 and EN 15804

Ecochain v4.3.1

Product:	3064592 - PE Flex. Bend BK 110 L=1.5 SRN DKF
Unit:	1 piece
Manufacturer:	Wavin - SE - Eskilstuna - Verified

LCA standard:	EN15804+A2 (2019)
Standard database:	Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified:	Yes

An Orbia business.

Issue date:	29-11-2024
End of validity:	29-11-2029
Verifier:	Martijn van Hövell - SGS Search

This LCA was evaluated according to EN15804+A2. It was concluded that the LCA complies with this standard.

The LCA background information and project dossier have been registered in the online Ecochain application in the account Wavin - SE - Eskilstuna - Verified (2020). (☑ = module declared, MND = module not declared).

A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
☑	☑	☑	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	☑	☑	☑	☑

Product stage

A1 Raw material supply A2 Transport A3 Manufacturing

Construction process stage

A4 Transport gate to site
A5 Assembly / Construction installation process

Use stage

B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment
B6 Operational energy use B7 Operational water use

End-of-Life stage

C1 De-construction demolition C2 Transport C3 Waste processing
C4 Disposal

Benefits and loads beyond the system boundaries

D Reuse- Recovery- Recycling- potential

Environmental impacts and parameters

GWP-total = EF Climate change [kg CO2 eq]; **GWP-f** = EF Climate change - Fossil [kg CO2 eq]; **GWP-b** = EF Climate change - Biogenic [kg CO2 eq]; **GWP-luluc** = EF Climate change - Land use and LU change [kg CO2 eq]; **ODP** = EF Ozone depletion [kg CFC11 eq]; **AP** = EF Acidification [mol H+ eq]; **EP-fw** = EF Eutrophication, freshwater [kg P eq]; **EP-m** = EF Eutrophication, marine [kg N eq]; **EP-T** = EF Eutrophication, terrestrial [mol N eq]; **POCP** = EF Photochemical ozone formation [kg NMVOC eq]; **ADP-mm** = EF Resource use, minerals and metals [kg Sb eq]; **ADP-f** = EF Resource use, fossils [MJ]; **WDP** = EF Water use [m3 depriv.]; **PM** = EF Particulate matter [disease inc.]; **IR** = EF Ionising radiation [kBq U-235 eq]; **ETP-fw** = EF Ecotoxicity, freshwater [CTUe]; **HTP-c** = EF Human toxicity, cancer [CTUh]; **HTP-nc** = EF Human toxicity, non-cancer [CTUh]; **SQP** = EF Land use [Pt]; **PERE** = Use of renewable primary energy excluding renewable primary energy resources used as raw materials [MJ]; **PERM** = Use of renewable primary energy resources used as raw materials [MJ]; **PERT** = Total use of renewable primary energy resources [MJ]; **PENRE** = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials [MJ]; **PENRM** = Use of non-renewable primary energy resources used as raw materials [MJ]; **PENRT** = Total use of non-renewable primary energy resources [MJ]; **PET** = Total energy [MJ]; **SM** = Use of secondary material [kg]; **RSF** = Use of renewable secondary fuels [MJ]; **NRSF** = Use of non-renewable secondary fuels [MJ]; **FW** = Use of net fresh water [m3]; **HWD** = Hazardous waste disposed [kg]; **NHWD** = Non-hazardous waste disposed [kg]; **RWD** = Radioactive waste disposed [kg]; **CRU** = Components for re-use [kg]; **MFR** = Materials for recycling [kg]; **MER** = Materials for energy recovery [kg]; **EET** = Exported energy thermic [MJ]; **EEE** = Exported energy electric [MJ]; **BIO-C-Product** = Biogenic C content, product [kg C]; **BIO-C-Packaging** = Biogenic C content, packaging [kg C]

Statement of Confidentiality

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.400E+0	1.645E-1	6.709E-2	2.632E+0	1.991E-2	6.484E-1	1.100E-2	-1.024E+0	2.287E+0
GWP-f	kg CO2 eq	2.383E+0	1.643E-1	5.541E-2	2.603E+0	1.990E-2	6.481E-1	1.100E-2	-1.022E+0	2.260E+0
GWP-b	kg CO2 eq	9.868E-3	4.721E-5	5.244E-3	1.516E-2	7.624E-6	1.911E-4	6.661E-7	-1.715E-3	1.364E-2
GWP-luluc	kg CO2 eq	7.512E-3	9.631E-5	6.442E-3	1.405E-2	7.043E-6	1.124E-4	1.609E-7	-3.709E-4	1.380E-2
ODP	kg CFC11 eq	6.640E-8	3.404E-8	6.276E-9	1.067E-7	4.586E-9	1.473E-8	2.354E-10	-5.183E-8	7.444E-8
AP	mol H+ eq	9.320E-3	3.924E-3	4.693E-4	1.371E-2	1.134E-4	6.192E-4	5.628E-6	-3.029E-3	1.142E-2
EP-fw	kg P eq	5.529E-5	9.918E-7	1.023E-6	5.731E-5	1.638E-7	3.256E-6	7.373E-9	-2.055E-5	4.019E-5
EP-m	kg N eq	1.597E-3	9.968E-4	1.391E-4	2.733E-3	4.056E-5	1.800E-4	3.948E-6	-5.500E-4	2.407E-3
EP-T	mol N eq	1.801E-2	1.107E-2	1.526E-3	3.061E-2	4.470E-4	1.981E-3	2.282E-5	-6.083E-3	2.698E-2
POCP	kg NMVOC eq	8.828E-3	2.900E-3	4.239E-4	1.215E-2	1.278E-4	6.255E-4	8.937E-6	-3.422E-3	9.493E-3
ADP-mm	kg Sb eq	3.289E-5	2.174E-6	1.667E-6	3.673E-5	5.148E-7	2.455E-6	5.670E-9	-6.641E-6	3.306E-5
ADP-f	MJ	7.832E+1	2.222E+0	5.505E-1	8.109E+1	3.055E-1	1.953E+0	1.720E-2	-3.039E+1	5.298E+1
WDP	m3 depriv.	2.407E+0	4.942E-3	3.547E-1	2.767E+0	9.374E-4	3.815E-2	8.835E-5	-8.559E-1	1.950E+0
PM	disease inc.	7.608E-8	8.190E-9	7.918E-9	9.219E-8	1.796E-9	1.017E-8	1.182E-10	-2.216E-8	8.211E-8
IR	kBq U-235 eq	6.786E-2	9.454E-3	1.637E-3	7.895E-2	1.335E-3	5.904E-3	7.997E-5	-2.888E-2	5.740E-2
ETP-fw	CTUe	1.950E+1	1.630E+0	1.535E+0	2.267E+1	2.480E-1	2.230E+0	1.515E-2	-5.312E+0	1.985E+1
HTP-c	CTUh	9.626E-10	8.617E-11	6.062E-11	1.109E-9	8.827E-12	2.673E-10	4.247E-13	-1.971E-10	1.189E-9
HTP-nc	CTUh	2.054E-8	1.513E-9	1.653E-9	2.370E-8	2.957E-10	3.350E-9	9.675E-12	-2.801E-9	2.456E-8
SQP	Pt	4.628E+0	8.878E-1	7.238E-2	5.588E+0	2.613E-1	1.567E+0	4.408E-2	-1.219E+0	6.242E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.284E+0	1.961E-2	3.472E+0	8.775E+0	4.382E-3	9.665E-2	6.750E-4	-6.558E-1	8.221E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.284E+0	1.961E-2	3.472E+0	8.775E+0	4.382E-3	9.665E-2	6.750E-4	-6.558E-1	8.221E+0
PENRE	MJ	8.398E+1	2.360E+0	5.846E-1	8.692E+1	3.243E-1	2.081E+0	1.825E-2	-3.273E+1	5.662E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	8.398E+1	2.360E+0	5.846E-1	8.692E+1	3.243E-1	2.081E+0	1.825E-2	-3.273E+1	5.662E+1
PET	MJ	8.926E+1	2.379E+0	4.057E+0	9.570E+1	3.287E-1	2.177E+0	1.892E-2	-3.339E+1	6.484E+1
SM	kg	0	0	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0
FW	m3	4.140E-2	1.716E-4	8.428E-3	5.000E-2	3.457E-5	1.123E-3	2.121E-5	-1.220E-2	3.898E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.355E-5	3.329E-6	8.383E-7	1.771E-5	7.812E-7	3.200E-6	2.073E-8	-1.009E-5	1.162E-5
NHWD	kg	1.222E-1	5.416E-2	2.569E-3	1.790E-1	1.893E-2	9.616E-2	7.568E-2	-3.071E-2	3.390E-1
RWD	kg	5.832E-5	1.515E-5	2.329E-6	7.579E-5	2.077E-6	7.488E-6	1.123E-7	-2.484E-5	6.063E-5
CRU	kg	0	0	0	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0	0	0	0
MER	kg	0	0	0	0	0	0	0	0	0
EET	MJ	0	0	0	0	0	0	0	0	0
EEE	MJ	0	0	0	0	0	0	0	0	0
Others	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
BIO-C-Product	kg C	0	0	0	0	0	0	0	0	0
BIO-C-Packaging	kg C	5.904E-8	0	0	5.904E-8	0	0	0	0	5.904E-8

Ecochain

Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
https://www.ecochain.com
+31 20 3035 777