

Environmental Profile

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

Ecochain v3.5.80



Product: 3087776 - Wafix PVC Bend 45° GY 125 SN4 S/SP
Unit: 1 Piece
Manufacturer: Wavin - NL - Hardenberg - Verified
Address: J.C. Kellerlaan 3
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Netherlands

LCA standard: NMD Bepalingsmethode 1.1 (2022)
Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified: Yes
Issue date: 08-06-2023
End of validity: 08-06-2028
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 - NL - Hardenberg - 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					Use stage							End-of-Life stage				
A1 Raw material supply A2 Transport A3 Manufacturing					B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment B6 Operational energy use B7 Operational water use							C1 De-construction demolition C2 Transport C3 Waste processing C4 Disposal				
Construction process stage												Benefits and loads beyond the system boundaries				
A4 Transport gate to site A5 Assembly / Construction installation process												D Reuse- Recovery- Recycling- potential				

Environmental impacts and parameters

ECI = Environmental Costs Indicator [euro]; **ADPE** = Abiotic depletion potential for non-fossil resources [kg Sb-eq]; **ADPF** = Abiotic depletion potential for fossil resources [kg Sb-eq]; **GWP** = Global warming potential [kg CO2-eq]; **ODP** = Depletion potential of the stratospheric ozone layer [kg CFC-11-eq]; **POCP** = Formation potential of tropospheric ozone photochemical oxidants [kg ethene-eq]; **AP** = Acidification potential of land and water [kg SO2-eq]; **EP** = Eutrophication potential [kg PO4 3--eq]; **HTP** = Human toxicity potential [kg 1,4-DB-eq]; **FAETP** = Freshwater aquatic ecotoxicity potential [kg 1,4-DB-eq]; **MAETP** = Marine aquatic ecotoxicity potential [kg 1,4-DB-eq]; **TETP** = Terrestrial ecotoxicity potential [kg 1,4-DB-eq]; **GWP-total** = EF EN15804+A2 Climate Change [kg CO2 eq]; **GWP-f** = EF Climate change - Fossil [kg CO2 eq]; **GWP-b** = EF EN15804+A2 Climate Change - Biogenic [kg CO2 eq]; **GWP-luluc** = EF EN15804+A2 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]; **EE** = Exported energy [MJ]; **EET** = Exported energy thermic [MJ]; **EEE** = Exported energy electric [MJ]

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Results

Environmental impact SBK set 1	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
ECI	euro	0.1	0	0.01	0.11	0	0.03	0	-0.05	0.09
ADPE	kg Sb-eq	8.59E-4	3.34E-7	1.58E-6	8.60E-4	3.05E-7	2.65E-6	3.40E-9	-1.02E-5	8.53E-4
ADPF	kg Sb-eq	1.13E-2	9.60E-5	2.72E-4	1.17E-2	8.59E-5	9.20E-4	4.72E-6	-6.12E-3	6.59E-3
GWP	kg CO2-eq	9.16E-1	1.31E-2	5.17E-2	9.80E-1	1.17E-2	3.29E-1	3.34E-3	-5.14E-1	8.11E-1
ODP	kg CFC-11-eq	4.76E-7	2.32E-9	4.09E-9	4.82E-7	2.17E-9	3.71E-8	1.12E-10	-2.45E-7	2.76E-7
POCP	kg ethene-eq	5.64E-4	7.88E-6	2.25E-5	5.94E-4	7.02E-6	7.37E-5	8.54E-7	-2.72E-4	4.04E-4
AP	kg SO2-eq	3.66E-3	5.74E-5	2.22E-4	3.94E-3	5.03E-5	5.33E-4	2.54E-6	-1.72E-3	2.80E-3
EP	kg PO4 3--eq	4.63E-4	1.13E-5	2.86E-5	5.03E-4	1.01E-5	8.16E-5	1.07E-6	-2.30E-4	3.66E-4
HTP	kg 1,4-DB-eq	3.48E-1	5.50E-3	2.40E-2	3.78E-1	5.00E-3	1.42E-1	2.73E-4	-1.61E-1	3.64E-1
FAETP	kg 1,4-DB-eq	1.04E-2	1.60E-4	8.20E-4	1.14E-2	1.47E-4	2.20E-3	1.01E-4	-4.50E-3	9.32E-3
MAETP	kg 1,4-DB-eq	2.46E+1	5.77E-1	3.23E+0	2.84E+1	5.24E-1	7.36E+0	1.18E-1	-1.04E+1	2.60E+1
TETP	kg 1,4-DB-eq	2.49E-3	1.94E-5	1.78E-3	4.30E-3	1.77E-5	5.03E-4	8.81E-7	-1.49E-3	3.32E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	9.47E-1	1.32E-2	5.91E-2	1.02E+0	1.18E-2	3.51E-1	3.90E-3	-4.86E-1	8.99E-1
GWP-f	kg CO2 eq	9.38E-1	1.32E-2	4.54E-2	9.96E-1	1.18E-2	3.32E-1	3.90E-3	-5.26E-1	8.18E-1
GWP-b	kg CO2 eq	8.10E-3	6.08E-6	9.38E-3	1.75E-2	7.16E-6	1.87E-2	4.75E-6	4.03E-2	7.65E-2
GWP-luluc	kg CO2 eq	1.01E-3	4.82E-6	4.31E-3	5.33E-3	4.17E-6	1.41E-4	9.80E-8	-6.17E-4	4.86E-3
ODP	kg CFC11 eq	4.71E-7	2.91E-9	4.80E-9	4.79E-7	2.72E-9	3.83E-8	1.40E-10	-2.43E-7	2.77E-7
AP	mol H+ eq	4.45E-3	7.63E-5	2.77E-4	4.80E-3	6.72E-5	6.70E-4	3.40E-6	-2.09E-3	3.45E-3
EP-fw	kg P eq	4.33E-5	1.33E-7	7.96E-7	4.42E-5	9.70E-8	4.71E-6	4.44E-9	-2.16E-5	2.74E-5
EP-m	kg N eq	7.88E-4	2.69E-5	6.54E-5	8.80E-4	2.40E-5	1.65E-4	2.26E-6	-3.73E-4	6.99E-4
EP-T	mol N eq	8.53E-3	2.97E-4	7.22E-4	9.55E-3	2.65E-4	1.82E-3	1.36E-5	-4.01E-3	7.63E-3
POCP	kg NMVOC eq	2.83E-3	8.47E-5	2.05E-4	3.12E-3	7.57E-5	5.47E-4	4.70E-6	-1.36E-3	2.39E-3
ADP-mm	kg Sb eq	8.58E-4	3.34E-7	1.58E-6	8.60E-4	3.05E-7	2.65E-6	3.40E-9	-1.02E-5	8.53E-4
ADP-f	MJ	2.41E+1	1.99E-1	5.08E-1	2.48E+1	1.81E-1	1.82E+0	1.02E-2	-1.29E+1	1.40E+1
WDP	m3 depriv.	1.46E+0	7.10E-4	3.93E-1	1.85E+0	5.56E-4	7.02E-2	6.44E-5	-7.64E-1	1.16E+0
PM	disease inc.	3.15E-8	1.18E-9	3.42E-9	3.61E-8	1.06E-9	8.41E-9	7.02E-11	-1.62E-8	2.95E-8
IR	kBq U-235 eq	5.33E-2	8.32E-4	8.08E-4	5.49E-2	7.91E-4	6.41E-3	4.70E-5	-2.52E-2	3.69E-2
ETP-fw	CTUe	2.72E+1	1.77E-1	1.18E+0	2.85E+1	1.47E-1	1.35E+1	1.49E-1	-1.00E+1	3.23E+1
HTP-c	CTUh	7.35E-10	5.74E-12	4.08E-11	7.82E-10	5.23E-12	2.04E-10	2.79E-13	-2.81E-10	7.11E-10
HTP-nc	CTUh	2.40E-8	1.94E-10	1.28E-9	2.55E-8	1.75E-10	4.80E-9	2.89E-11	-9.69E-9	2.08E-8
SQP	Pt	4.80E+0	1.72E-1	3.80E-2	5.01E+0	1.55E-1	1.13E+0	2.61E-2	-9.07E+0	-2.75E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.49E+0	2.49E-3	2.47E+0	3.96E+0	2.60E-3	1.29E-1	3.85E-4	-1.93E+0	2.17E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.49E+0	2.49E-3	2.47E+0	3.96E+0	2.60E-3	1.29E-1	3.85E-4	-1.93E+0	2.17E+0
PENRE	MJ	2.59E+1	2.11E-1	5.49E-1	2.66E+1	1.92E-1	1.94E+0	1.08E-2	-1.39E+1	1.49E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.59E+1	2.11E-1	5.49E-1	2.66E+1	1.92E-1	1.94E+0	1.08E-2	-1.39E+1	1.49E+1
PET	MJ	2.74E+1	2.13E-1	3.02E+0	3.06E+1	1.95E-1	2.07E+0	1.12E-2	-1.58E+1	1.71E+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	1.69E-2	2.42E-5	9.29E-3	2.62E-2	2.05E-5	1.94E-3	1.25E-5	-9.03E-3	1.92E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.22E-4	5.03E-7	5.39E-7	1.23E-4	4.63E-7	2.99E-6	1.24E-8	-1.03E-5	1.16E-4
NHWD	kg	9.36E-2	1.26E-2	8.33E-4	1.07E-1	1.12E-2	6.73E-2	4.48E-2	-4.06E-2	1.90E-1
RWD	kg	4.80E-5	1.30E-6	1.00E-6	5.03E-5	1.23E-6	6.93E-6	6.64E-8	-2.24E-5	3.61E-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
EE	MJ	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



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