Environmental Profile

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

Ecochain v3.5.80

Product:	3025927 - PVC Bend 67°3 GY 32 S/SP BC
Unit:	1 piece
Manufacturer:	Wavin - PL -Buk - Extra products

With the PVC range to be glued Wavin, you benefit from a complete choice of pipes and fittings 100% compatible, in all standard sizes on the market, from 32 to 315mm. This system includes a wide range of special accessories: branch saddles, flexible connectors, etc. Certified quality: Wavin glue-on PVC products benefit from the necessary certifications in France (NF-E).

LCA standard:	EN15804+A2 (2019)
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 - PL -Buk - Extra products (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 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]

Statement of Confidentiality

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	8.15E-2	7.01E-3	1.45E-4	8.87E-2	1.13E-3	7.87E-2	3.52E-4	-5.68E-2	1.12E-1
GWP-f	kg CO2 eq	1.14E-1	7.01E-3	1.46E-4	1.21E-1	1.13E-3	4.27E-2	3.52E-4	-6.27E-2	1.03E-1
GWP-b	kg CO2 eq	-3.26E-2	4.26E-6	-1.54E-6	-3.26E-2	6.87E-7	3.60E-2	4.58E-7	5.96E-3	9.45E-3
GWP-luluc	kg CO2 eq	1.31E-4	2.48E-6	1.49E-7	1.34E-4	4.01E-7	1.49E-5	8.89E-9	-9.13E-5	5.77E-5
ODP	kg CFC11 eq	5.25E-8	1.62E-9	8.26E-12	5.41E-8	2.61E-10	4.21E-9	1.34E-11	-2.60E-8	3.25E-8
AP	mol H+ eq	5.19E-4	3.99E-5	1.47E-6	5.60E-4	6.45E-6	7.28E-5	3.23E-7	-2.47E-4	3.92E-4
EP-fw	kg P eq	4.93E-6	5.77E-8	8.24E-9	4.99E-6	9.31E-9	5.01E-7	4.10E-10	-2.55E-6	2.95E-6
EP-m	kg N eq	9.66E-5	1.43E-5	1.55E-7	1.11E-4	2.31E-6	1.83E-5	2.06E-7	-4.82E-5	8.37E-5
EP-T	mol N eq	1.03E-3	1.57E-4	1.85E-6	1.19E-3	2.54E-5	2.02E-4	1.29E-6	-5.28E-4	8.89E-4
POCP	kg NMVOC eq	3.58E-4	4.50E-5	6.28E-7	4.04E-4	7.27E-6	6.00E-5	4.44E-7	-1.77E-4	2.95E-4
ADP-mm	kg Sb eq	2.76E-6	1.81E-7	1.97E-8	2.96E-6	2.93E-8	2.82E-7	3.19E-10	-1.11E-6	2.16E-6
ADP-f	MJ	2.79E+0	1.08E-1	1.36E-3	2.90E+0	1.74E-2	1.91E-1	9.75E-4	-1.42E+0	1.69E+0
WDP	m3 depriv.	1.62E-1	3.30E-4	5.22E-5	1.62E-1	5.33E-5	7.51E-3	4.46E-6	-8.06E-2	8.95E-2
PM	disease inc.	4.24E-9	6.33E-10	9.08E-12	4.89E-9	1.02E-10	8.92E-10	6.71E-12	-2.37E-9	3.52E-9
IR	kBq U-235 eq	5.70E-3	4.70E-4	1.02E-6	6.17E-3	7.59E-5	6.85E-4	4.51E-6	-2.89E-3	4.05E-3
ETP-fw	CTUe	2.60E+0	8.74E-2	1.21E-2	2.70E+0	1.41E-2	1.49E+0	1.63E-2	-1.29E+0	2.93E+0
HTP-c	CTUh	8.12E-11	3.11E-12	6.17E-13	8.49E-11	5.02E-13	2.15E-11	2.57E-14	-4.17E-11	6.52E-11
HTP-nc	CTUh	2.31E-9	1.04E-10	1.57E-11	2.43E-9	1.68E-11	5.19E-10	3.10E-12	-1.12E-9	1.86E-9
SQP	Pt	3.38E+0	9.20E-2	2.24E-3	3.47E+0	1.49E-2	1.16E-1	2.51E-3	-3.59E+0	1.36E-2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.43E-1	1.54E-3	2.40E-2	7.68E-1	2.49E-4	1.37E-2	3.74E-5	-6.06E-1	1.76E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	7.43E-1	1.54E-3	2.40E-2	7.68E-1	2.49E-4	1.37E-2	3.74E-5	-6.06E-1	1.76E-1
PENRE	MJ	2.99E+0	1.14E-1	1.44E-3	3.11E+0	1.84E-2	2.03E-1	1.03E-3	-1.53E+0	1.80E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.99E+0	1.14E-1	1.44E-3	3.11E+0	1.84E-2	2.03E-1	1.03E-3	-1.53E+0	1.80E+0
PET	MJ	3.74E+0	1.16E-1	2.55E-2	3.88E+0	1.87E-2	2.17E-1	1.07E-3	-2.14E+0	1.98E+0
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	1.90E-3	1.22E-5	1.46E-6	1.91E-3	1.97E-6	2.08E-4	1.20E-6	-1.01E-3	1.11E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.23E-6	2.75E-7	2.73E-13	2.51E-6	4.44E-8	3.18E-7	1.17E-9	-1.37E-6	1.51E-6
NHWD	kg	1.20E-2	6.67E-3	1.05E-6	1.87E-2	1.08E-3	7.36E-3	4.30E-3	-5.56E-3	2.59E-2
RWD	kg	5.14E-6	7.32E-7	1.10E-13	5.87E-6	1.18E-7	7.39E-7	6.37E-9	-2.65E-6	4.08E-6
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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