

Environmental Profile

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

Ecochain v3.5.64



Product: 3080048 - AS+ Pipe LGY DN150 L=2 S/PL
 Unit: 1 piece
 Manufacturer: Wavin Germany Twist
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 Germany
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LCA standard: EN15804+A2 (2019)
 Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
 Externally verified: Yes
 Issue date: 08-04-2022
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 Verifier: Harry van Ewijk - SGS Search



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

Wavin AS+ is a mineral-reinforced polypropylene (PP) low noise soil and waste solution. The AS+ has a unique material composition for optimal noise reduction.

The LCA background information and project dossier have been registered in the online Ecochain application in the account Wavin Germany Twist (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

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]; **EE** = Exported energy [MJ]; **EET** = Exported energy thermic [MJ]; **EEE** = Exported energy electric [MJ]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.49E+1	4.30E-1	7.85E-1	1.61E+1	2.88E-1	7.69E+0	5.24E-2	-9.96E+0	1.42E+1
GWP-f	kg CO2 eq	1.49E+1	4.30E-1	6.51E-1	1.60E+1	2.87E-1	7.66E+0	5.24E-2	-9.92E+0	1.41E+1
GWP-b	kg CO2 eq	-3.09E-2	1.98E-4	9.64E-2	6.57E-2	1.75E-4	2.80E-2	1.01E-4	-4.00E-2	5.40E-2
GWP-luluc	kg CO2 eq	8.93E-3	1.57E-4	3.83E-2	4.74E-2	1.02E-4	2.24E-3	2.10E-6	-2.20E-3	4.75E-2
ODP	kg CFC11 eq	1.03E-6	9.48E-8	7.89E-8	1.20E-6	6.62E-8	4.96E-7	3.25E-9	-2.65E-7	1.50E-6
AP	mol H+ eq	6.30E-2	2.49E-3	2.97E-3	6.85E-2	1.64E-3	1.22E-2	7.60E-5	-3.12E-2	5.12E-2
EP-fw	kg P eq	3.66E-4	4.33E-6	9.14E-6	3.80E-4	2.37E-6	1.06E-4	9.52E-8	-1.26E-4	3.63E-4
EP-m	kg N eq	1.16E-2	8.78E-4	8.75E-4	1.33E-2	5.86E-4	3.17E-3	4.39E-5	-5.35E-3	1.18E-2
EP-T	mol N eq	1.32E-1	9.68E-3	9.14E-3	1.51E-1	6.46E-3	3.50E-2	3.10E-4	-5.93E-2	1.33E-1
POCP	kg NMVOC eq	4.76E-2	2.76E-3	2.62E-3	5.30E-2	1.85E-3	1.09E-2	9.89E-5	-2.79E-2	3.80E-2
ADP-mm	kg Sb eq	1.13E-3	1.09E-5	1.07E-5	1.15E-3	7.44E-6	4.37E-5	7.61E-8	-7.73E-5	1.12E-3
ADP-f	MJ	3.37E+2	6.48E+0	8.38E+0	3.52E+2	4.41E+0	3.87E+1	2.35E-1	-3.36E+2	5.96E+1
WDP	m3 depriv.	1.50E+1	2.32E-2	4.58E+0	1.96E+1	1.35E-2	8.66E-1	1.15E-3	-6.24E+0	1.42E+1
PM	disease inc.	5.40E-7	3.86E-8	4.60E-8	6.24E-7	2.59E-8	1.99E-7	1.61E-9	-2.67E-7	5.84E-7
IR	kBq U-235 eq	5.43E-1	2.71E-2	1.20E-2	5.82E-1	1.93E-2	1.34E-1	1.08E-3	-1.63E-1	5.73E-1
ETP-fw	CTUe	3.59E+3	5.78E+0	1.08E+1	3.61E+3	3.58E+0	8.54E+1	1.84E-1	-4.46E+1	3.65E+3
HTP-c	CTUh	5.47E-9	1.87E-10	4.78E-10	6.14E-9	1.27E-10	4.94E-9	5.38E-12	-1.81E-9	9.40E-9
HTP-nc	CTUh	1.73E-6	6.32E-9	1.12E-8	1.75E-6	4.27E-9	6.54E-8	1.11E-10	-5.29E-8	1.77E-6
SQP	Pt	4.24E+1	5.62E+0	9.13E-1	4.89E+1	3.77E+0	2.76E+1	5.96E-1	-9.20E+0	7.17E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.09E+1	8.11E-2	2.07E+1	3.17E+1	6.33E-2	3.29E+0	8.33E-3	-4.49E+0	3.05E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.09E+1	8.11E-2	2.07E+1	3.17E+1	6.33E-2	3.29E+0	8.33E-3	-4.49E+0	3.05E+1
PENRE	MJ	3.61E+2	6.88E+0	9.13E+0	3.77E+2	4.68E+0	4.12E+1	2.49E-1	-3.61E+2	6.22E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.61E+2	6.88E+0	9.13E+0	3.77E+2	4.68E+0	4.12E+1	2.49E-1	-3.61E+2	6.22E+1
PET	MJ	3.72E+2	6.96E+0	2.98E+1	4.09E+2	4.75E+0	4.45E+1	2.57E-1	-3.66E+2	9.27E+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	3.33E-1	7.89E-4	1.08E-1	4.41E-1	4.99E-4	2.60E-2	2.88E-4	-9.31E-2	3.75E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.40E-4	1.64E-5	1.14E-5	1.67E-4	1.13E-5	8.18E-5	2.81E-7	-5.23E-5	2.08E-4
NHWD	kg	1.18E+0	4.11E-1	4.74E-2	1.64E+0	2.73E-1	1.86E+0	1.10E+0	-2.70E-1	4.60E+0
RWD	kg	5.76E-4	4.25E-5	1.66E-5	6.35E-4	3.00E-5	1.69E-4	1.54E-6	-1.43E-4	6.92E-4
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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