

Environmental Profile

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

Ecochain v3.5.64



Product: 3080033 - AS+ Pipe LGY DN100 L=1 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	4.92E+0	1.41E-1	2.59E-1	5.32E+0	9.47E-2	2.53E+0	1.75E-2	-3.28E+0	4.69E+0
GWP-f	kg CO2 eq	4.93E+0	1.41E-1	2.15E-1	5.29E+0	9.46E-2	2.52E+0	1.74E-2	-3.27E+0	4.65E+0
GWP-b	kg CO2 eq	-1.06E-2	6.52E-5	3.18E-2	2.13E-2	5.74E-5	9.83E-3	3.32E-5	-1.32E-2	1.80E-2
GWP-luluc	kg CO2 eq	2.93E-3	5.17E-5	1.26E-2	1.56E-2	3.35E-5	7.35E-4	6.92E-7	-7.24E-4	1.57E-2
ODP	kg CFC11 eq	3.40E-7	3.12E-8	2.60E-8	3.98E-7	2.18E-8	1.63E-7	1.07E-9	-8.76E-8	4.96E-7
AP	mol H+ eq	2.08E-2	8.19E-4	9.82E-4	2.26E-2	5.39E-4	4.02E-3	2.50E-5	-1.03E-2	1.69E-2
EP-fw	kg P eq	1.21E-4	1.42E-6	3.02E-6	1.25E-4	7.78E-7	3.49E-5	3.14E-8	-4.14E-5	1.19E-4
EP-m	kg N eq	3.81E-3	2.89E-4	2.89E-4	4.39E-3	1.93E-4	1.04E-3	1.45E-5	-1.76E-3	3.88E-3
EP-T	mol N eq	4.34E-2	3.18E-3	3.02E-3	4.96E-2	2.12E-3	1.15E-2	1.02E-4	-1.95E-2	4.39E-2
POCP	kg NMVOC eq	1.57E-2	9.08E-4	8.64E-4	1.75E-2	6.07E-4	3.57E-3	3.26E-5	-9.17E-3	1.25E-2
ADP-mm	kg Sb eq	3.75E-4	3.58E-6	3.54E-6	3.82E-4	2.45E-6	1.44E-5	2.51E-8	-2.56E-5	3.73E-4
ADP-f	MJ	1.12E+2	2.13E+0	2.77E+0	1.17E+2	1.45E+0	1.27E+1	7.73E-2	-1.11E+2	2.03E+1
WDP	m3 depriv.	4.94E+0	7.62E-3	1.51E+0	6.46E+0	4.46E-3	2.85E-1	3.81E-4	-2.05E+0	4.69E+0
PM	disease inc.	1.78E-7	1.27E-8	1.52E-8	2.06E-7	8.54E-9	6.55E-8	5.29E-10	-8.79E-8	1.93E-7
IR	kBq U-235 eq	1.79E-1	8.92E-3	3.98E-3	1.92E-1	6.35E-3	4.39E-2	3.54E-4	-5.38E-2	1.89E-1
ETP-fw	CTUe	1.17E+3	1.90E+0	3.56E+0	1.18E+3	1.18E+0	2.80E+1	6.08E-2	-1.47E+1	1.19E+3
HTP-c	CTUh	1.80E-9	6.16E-11	1.58E-10	2.02E-9	4.20E-11	1.62E-9	1.78E-12	-5.97E-10	3.09E-9
HTP-nc	CTUh	5.68E-7	2.08E-9	3.68E-9	5.73E-7	1.41E-9	2.15E-8	3.66E-11	-1.74E-8	5.79E-7
SQP	Pt	1.40E+1	1.85E+0	3.02E-1	1.62E+1	1.24E+0	9.06E+0	1.96E-1	-3.05E+0	2.36E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.61E+0	2.67E-2	6.82E+0	1.05E+1	2.08E-2	1.08E+0	2.75E-3	-1.48E+0	1.01E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.61E+0	2.67E-2	6.82E+0	1.05E+1	2.08E-2	1.08E+0	2.75E-3	-1.48E+0	1.01E+1
PENRE	MJ	1.20E+2	2.26E+0	3.02E+0	1.25E+2	1.54E+0	1.35E+1	8.21E-2	-1.19E+2	2.12E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.20E+2	2.26E+0	3.02E+0	1.25E+2	1.54E+0	1.35E+1	8.21E-2	-1.19E+2	2.12E+1
PET	MJ	1.23E+2	2.29E+0	9.84E+0	1.35E+2	1.56E+0	1.46E+1	8.48E-2	-1.20E+2	3.13E+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	1.09E-1	2.59E-4	3.56E-2	1.45E-1	1.64E-4	8.54E-3	9.49E-5	-3.07E-2	1.23E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.60E-5	5.40E-6	3.75E-6	5.52E-5	3.71E-6	2.68E-5	9.27E-8	-1.73E-5	6.86E-5
NHWD	kg	3.88E-1	1.35E-1	1.56E-2	5.39E-1	9.00E-2	6.11E-1	3.61E-1	-8.88E-2	1.51E+0
RWD	kg	1.90E-4	1.40E-5	5.49E-6	2.10E-4	9.88E-6	5.53E-5	5.06E-7	-4.73E-5	2.28E-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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