

Environmental Profile

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

Ecochain v3.5.64



Product: 3080047 - AS+ Pipe LGY DN150 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	7.89E+0	2.26E-1	4.06E-1	8.53E+0	1.51E-1	4.10E+0	2.78E-2	-5.25E+0	7.55E+0
GWP-f	kg CO2 eq	7.91E+0	2.26E-1	3.36E-1	8.47E+0	1.51E-1	4.08E+0	2.77E-2	-5.23E+0	7.50E+0
GWP-b	kg CO2 eq	-1.89E-2	1.04E-4	4.98E-2	3.10E-2	9.17E-5	1.60E-2	5.31E-5	-2.09E-2	2.62E-2
GWP-luluc	kg CO2 eq	4.74E-3	8.27E-5	1.98E-2	2.46E-2	5.34E-5	1.17E-3	1.10E-6	-1.15E-3	2.47E-2
ODP	kg CFC11 eq	5.55E-7	4.98E-8	4.08E-8	6.46E-7	3.48E-8	2.60E-7	1.71E-9	-1.42E-7	8.00E-7
AP	mol H+ eq	3.35E-2	1.31E-3	1.54E-3	3.63E-2	8.60E-4	6.42E-3	4.00E-5	-1.64E-2	2.72E-2
EP-fw	kg P eq	1.95E-4	2.28E-6	4.72E-6	2.02E-4	1.24E-6	5.57E-5	5.01E-8	-6.60E-5	1.93E-4
EP-m	kg N eq	6.13E-3	4.61E-4	4.52E-4	7.04E-3	3.08E-4	1.67E-3	2.34E-5	-2.81E-3	6.23E-3
EP-T	mol N eq	6.98E-2	5.08E-3	4.72E-3	7.96E-2	3.39E-3	1.84E-2	1.63E-4	-3.12E-2	7.04E-2
POCP	kg NMVOC eq	2.53E-2	1.45E-3	1.35E-3	2.81E-2	9.69E-4	5.70E-3	5.21E-5	-1.46E-2	2.02E-2
ADP-mm	kg Sb eq	6.16E-4	5.72E-6	5.53E-6	6.27E-4	3.91E-6	2.29E-5	4.01E-8	-4.13E-5	6.13E-4
ADP-f	MJ	1.79E+2	3.40E+0	4.33E+0	1.87E+2	2.32E+0	2.03E+1	1.24E-1	-1.77E+2	3.28E+1
WDP	m3 depriv.	7.91E+0	1.22E-2	2.37E+0	1.03E+1	7.11E-3	4.55E-1	6.07E-4	-3.27E+0	7.48E+0
PM	disease inc.	2.88E-7	2.03E-8	2.38E-8	3.32E-7	1.36E-8	1.05E-7	8.46E-10	-1.40E-7	3.11E-7
IR	kBq U-235 eq	2.90E-1	1.43E-2	6.23E-3	3.11E-1	1.01E-2	7.01E-2	5.66E-4	-8.59E-2	3.06E-1
ETP-fw	CTUe	1.88E+3	3.03E+0	5.58E+0	1.89E+3	1.88E+0	4.49E+1	9.76E-2	-2.34E+1	1.91E+3
HTP-c	CTUh	2.90E-9	9.84E-11	2.47E-10	3.25E-9	6.70E-11	2.59E-9	2.84E-12	-9.53E-10	4.96E-9
HTP-nc	CTUh	9.10E-7	3.32E-9	5.76E-9	9.19E-7	2.24E-9	3.43E-8	5.86E-11	-2.78E-8	9.28E-7
SQP	Pt	2.28E+1	2.95E+0	4.72E-1	2.62E+1	1.98E+0	1.45E+1	3.14E-1	-4.87E+0	3.81E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.83E+0	4.26E-2	1.07E+1	1.66E+1	3.32E-2	1.73E+0	4.39E-3	-2.36E+0	1.59E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.83E+0	4.26E-2	1.07E+1	1.66E+1	3.32E-2	1.73E+0	4.39E-3	-2.36E+0	1.59E+1
PENRE	MJ	1.92E+2	3.61E+0	4.72E+0	2.00E+2	2.46E+0	2.16E+1	1.31E-1	-1.90E+2	3.42E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.92E+2	3.61E+0	4.72E+0	2.00E+2	2.46E+0	2.16E+1	1.31E-1	-1.90E+2	3.42E+1
PET	MJ	1.97E+2	3.66E+0	1.54E+1	2.17E+2	2.49E+0	2.33E+1	1.35E-1	-1.92E+2	5.01E+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	1.76E-1	4.15E-4	5.57E-2	2.32E-1	2.62E-4	1.37E-2	1.52E-4	-4.89E-2	1.97E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	7.43E-5	8.62E-6	5.88E-6	8.88E-5	5.93E-6	4.29E-5	1.48E-7	-2.80E-5	1.10E-4
NHWD	kg	6.25E-1	2.16E-1	2.45E-2	8.65E-1	1.44E-1	9.77E-1	5.76E-1	-1.42E-1	2.42E+0
RWD	kg	3.10E-4	2.23E-5	8.59E-6	3.41E-4	1.58E-5	8.84E-5	8.08E-7	-7.56E-5	3.70E-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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