

Environmental Profile

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

Ecochain v3.5.64



Product: 3080058 - AS+ Pipe LGY DN50 L=0,25 S/PL
 Unit: 1 piece
 Manufacturer: Wavin Germany Twist
 Address: Industriestraße 20
 49767 Twist
 Germany
 Contact: <https://www.wavin.com/en-en>

LCA standard: EN15804+A2 (2019)
 Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
 Externally verified: Yes
 Issue date: 08-04-2022
 End of validity: 08-04-2027
 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	5.12E-1	1.84E-2	2.43E-2	5.55E-1	7.51E-3	2.68E-1	1.54E-3	-2.74E-1	5.57E-1
GWP-f	kg CO2 eq	5.12E-1	1.84E-2	1.98E-2	5.50E-1	7.50E-3	2.40E-1	1.54E-3	-3.35E-1	4.65E-1
GWP-b	kg CO2 eq	-2.86E-4	8.48E-6	2.97E-3	2.69E-3	4.56E-6	2.78E-2	3.02E-6	6.05E-2	9.10E-2
GWP-luluc	kg CO2 eq	6.32E-4	6.73E-6	1.52E-3	2.16E-3	2.66E-6	6.30E-5	6.19E-8	-4.95E-4	1.73E-3
ODP	kg CFC11 eq	4.26E-8	4.06E-9	2.27E-9	4.89E-8	1.73E-9	1.53E-8	9.00E-11	-1.29E-8	5.31E-8
AP	mol H+ eq	2.30E-3	1.07E-4	9.55E-5	2.50E-3	4.27E-5	3.69E-4	2.15E-6	-1.23E-3	1.69E-3
EP-fw	kg P eq	1.54E-5	1.85E-7	3.02E-7	1.59E-5	6.18E-8	3.14E-6	2.82E-9	-9.09E-6	1.00E-5
EP-m	kg N eq	4.66E-4	3.76E-5	2.51E-5	5.28E-4	1.53E-5	9.83E-5	1.30E-6	-2.28E-4	4.16E-4
EP-T	mol N eq	5.13E-3	4.14E-4	2.65E-4	5.81E-3	1.69E-4	1.08E-3	8.72E-6	-2.56E-3	4.52E-3
POCP	kg NMVOC eq	1.68E-3	1.18E-4	7.59E-5	1.88E-3	4.82E-5	3.33E-4	2.80E-6	-1.03E-3	1.23E-3
ADP-mm	kg Sb eq	4.10E-5	4.66E-7	4.09E-7	4.19E-5	1.94E-7	1.30E-6	2.18E-9	-2.95E-6	4.04E-5
ADP-f	MJ	1.07E+1	2.77E-1	2.50E-1	1.12E+1	1.15E-1	1.12E+0	6.57E-3	-1.07E+1	1.72E+0
WDP	m3 depriv.	4.85E-1	9.91E-4	1.48E-1	6.34E-1	3.54E-4	2.48E-2	3.86E-5	-2.75E-1	3.85E-1
PM	disease inc.	2.20E-8	1.65E-9	1.30E-9	2.49E-8	6.77E-10	5.90E-9	4.52E-11	-1.38E-8	1.77E-8
IR	kBq U-235 eq	2.02E-2	1.16E-3	3.34E-4	2.17E-2	5.04E-4	3.97E-3	3.01E-5	-8.71E-3	1.75E-2
ETP-fw	CTUe	1.20E+2	2.47E-1	3.81E-1	1.21E+2	9.35E-2	2.64E+0	5.40E-3	-5.96E+0	1.18E+2
HTP-c	CTUh	2.09E-10	8.02E-12	1.63E-11	2.33E-10	3.33E-12	1.49E-10	1.62E-13	-9.04E-11	2.96E-10
HTP-nc	CTUh	5.53E-8	2.70E-10	4.02E-10	5.60E-8	1.12E-10	1.93E-9	3.26E-12	-2.81E-9	5.52E-8
SQP	Pt	3.85E+0	2.40E-1	2.43E-2	4.12E+0	9.86E-2	7.69E-1	1.69E-2	-1.13E+1	-6.33E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	8.56E-1	3.47E-3	8.22E-1	1.68E+0	1.65E-3	9.74E-2	2.43E-4	-2.14E+0	-3.58E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	8.56E-1	3.47E-3	8.22E-1	1.68E+0	1.65E-3	9.74E-2	2.43E-4	-2.14E+0	-3.58E-1
PENRE	MJ	1.14E+1	2.94E-1	2.72E-1	1.20E+1	1.22E-1	1.19E+0	6.97E-3	-1.15E+1	1.80E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.14E+1	2.94E-1	2.72E-1	1.20E+1	1.22E-1	1.19E+0	6.97E-3	-1.15E+1	1.80E+0
PET	MJ	1.23E+1	2.98E-1	1.09E+0	1.37E+1	1.24E-1	1.28E+0	7.21E-3	-1.36E+1	1.44E+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	1.12E-2	3.38E-5	3.50E-3	1.47E-2	1.30E-5	7.73E-4	8.06E-6	-5.09E-3	1.04E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.79E-6	7.02E-7	3.07E-7	6.80E-6	2.95E-7	2.48E-6	7.97E-9	-2.42E-6	7.16E-6
NHWD	kg	4.89E-2	1.76E-2	1.25E-3	6.77E-2	7.14E-3	5.35E-2	2.89E-2	-1.30E-2	1.44E-1
RWD	kg	2.17E-5	1.82E-6	4.40E-7	2.40E-5	7.83E-7	5.04E-6	4.27E-8	-7.96E-6	2.19E-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



Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
<https://www.ecochain.com>
+31 20 3035 777