

# Environmental Profile

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

Ecochain v3.5.64



Product: 3080039 - AS+ Pipe LGY DN125 L=0,5 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	☑	☑	☑	☑
<b>Product stage</b>					<b>Use stage</b>							<b>End-of-Life stage</b>				
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				
<b>Construction process stage</b>					<b>Benefits and loads beyond the system boundaries</b>											
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]

## Statement of Confidentiality

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# Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	3.09E+0	8.73E-2	1.57E-1	3.33E+0	5.85E-2	1.62E+0	1.10E-2	-2.04E+0	2.98E+0
GWP-f	kg CO2 eq	3.09E+0	8.72E-2	1.30E-1	3.31E+0	5.84E-2	1.61E+0	1.10E-2	-2.03E+0	2.96E+0
GWP-b	kg CO2 eq	-8.26E-3	4.03E-5	1.92E-2	1.10E-2	3.55E-5	6.64E-3	2.07E-5	-8.06E-3	9.63E-3
GWP-luluc	kg CO2 eq	1.85E-3	3.20E-5	7.64E-3	9.52E-3	2.07E-5	4.52E-4	4.30E-7	-4.47E-4	9.55E-3
ODP	kg CFC11 eq	2.24E-7	1.93E-8	1.57E-8	2.59E-7	1.35E-8	1.00E-7	6.64E-10	-5.67E-8	3.16E-7
AP	mol H+ eq	1.31E-2	5.06E-4	5.93E-4	1.42E-2	3.33E-4	2.48E-3	1.56E-5	-6.35E-3	1.07E-2
EP-fw	kg P eq	7.63E-5	8.80E-7	1.82E-6	7.90E-5	4.81E-7	2.14E-5	1.95E-8	-2.55E-5	7.54E-5
EP-m	kg N eq	2.40E-3	1.78E-4	1.75E-4	2.75E-3	1.19E-4	6.44E-4	9.25E-6	-1.09E-3	2.43E-3
EP-T	mol N eq	2.73E-2	1.97E-3	1.82E-3	3.11E-2	1.31E-3	7.11E-3	6.34E-5	-1.21E-2	2.75E-2
POCP	kg NMVOC eq	9.95E-3	5.61E-4	5.22E-4	1.10E-2	3.75E-4	2.20E-3	2.03E-5	-5.66E-3	7.97E-3
ADP-mm	kg Sb eq	2.53E-4	2.21E-6	2.14E-6	2.58E-4	1.51E-6	8.84E-6	1.56E-8	-1.65E-5	2.51E-4
ADP-f	MJ	7.05E+1	1.32E+0	1.67E+0	7.35E+1	8.97E-1	7.83E+0	4.80E-2	-6.85E+1	1.38E+1
WDP	m3 depriv.	3.07E+0	4.71E-3	9.13E-1	3.99E+0	2.75E-3	1.76E-1	2.37E-4	-1.26E+0	2.90E+0
PM	disease inc.	1.14E-7	7.83E-9	9.17E-9	1.31E-7	5.27E-9	4.03E-8	3.29E-10	-5.42E-8	1.23E-7
IR	kBq U-235 eq	1.15E-1	5.51E-3	2.40E-3	1.23E-1	3.92E-3	2.70E-2	2.20E-4	-3.33E-2	1.21E-1
ETP-fw	CTUe	7.23E+2	1.17E+0	2.15E+0	7.26E+2	7.28E-1	1.73E+1	3.84E-2	-9.09E+0	7.35E+2
HTP-c	CTUh	1.14E-9	3.80E-11	9.53E-11	1.28E-9	2.59E-11	9.99E-10	1.10E-12	-3.70E-10	1.93E-9
HTP-nc	CTUh	3.49E-7	1.28E-9	2.22E-9	3.53E-7	8.68E-10	1.32E-8	2.29E-11	-1.08E-8	3.56E-7
SQP	Pt	9.04E+0	1.14E+0	1.82E-1	1.04E+1	7.67E-1	5.58E+0	1.22E-1	-1.91E+0	1.49E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.30E+0	1.65E-2	4.12E+0	6.43E+0	1.29E-2	6.64E-1	1.71E-3	-9.17E-1	6.20E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.30E+0	1.65E-2	4.12E+0	6.43E+0	1.29E-2	6.64E-1	1.71E-3	-9.17E-1	6.20E+0
PENRE	MJ	7.55E+1	1.40E+0	1.82E+0	7.87E+1	9.52E-1	8.33E+0	5.09E-2	-7.36E+1	1.44E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.55E+1	1.40E+0	1.82E+0	7.87E+1	9.52E-1	8.33E+0	5.09E-2	-7.36E+1	1.44E+1
PET	MJ	7.78E+1	1.41E+0	5.94E+0	8.52E+1	9.65E-1	8.99E+0	5.27E-2	-7.45E+1	2.06E+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	6.82E-2	1.60E-4	2.15E-2	8.99E-2	1.01E-4	5.32E-3	5.89E-5	-1.89E-2	7.65E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.93E-5	3.33E-6	2.27E-6	3.49E-5	2.29E-6	1.65E-5	5.75E-8	-1.11E-5	4.27E-5
NHWD	kg	2.44E-1	8.35E-2	9.45E-3	3.37E-1	5.56E-2	3.77E-1	2.24E-1	-5.49E-2	9.39E-1
RWD	kg	1.24E-4	8.64E-6	3.31E-6	1.36E-4	6.10E-6	3.40E-5	3.14E-7	-2.94E-5	1.47E-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



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