

# Environmental Profile

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

Ecochain v3.5.64



Product: 3080019 - AS+ Longsocket DN 100  
 Unit: 1 piece  
 Manufacturer: Wavin Germany Twist  
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 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	1.11E+0	4.12E-2	5.72E-2	1.21E+0	1.77E-2	5.76E-1	3.65E-3	-6.91E-1	1.11E+0
GWP-f	kg CO2 eq	1.11E+0	4.12E-2	4.66E-2	1.20E+0	1.77E-2	5.56E-1	3.64E-3	-7.29E-1	1.05E+0
GWP-b	kg CO2 eq	-2.19E-3	1.90E-5	6.99E-3	4.82E-3	1.07E-5	1.99E-2	7.11E-6	3.84E-2	6.31E-2
GWP-luluc	kg CO2 eq	9.07E-4	1.51E-5	3.58E-3	4.50E-3	6.25E-6	1.45E-4	1.46E-7	-4.40E-4	4.22E-3
ODP	kg CFC11 eq	8.94E-8	9.09E-9	5.32E-9	1.04E-7	4.07E-9	3.44E-8	2.12E-10	-2.27E-8	1.20E-7
AP	mol H+ eq	4.91E-3	2.39E-4	2.24E-4	5.37E-3	1.01E-4	8.16E-4	5.06E-6	-2.40E-3	3.90E-3
EP-fw	kg P eq	2.98E-5	4.15E-7	7.10E-7	3.09E-5	1.45E-7	7.26E-6	6.64E-9	-1.24E-5	2.60E-5
EP-m	kg N eq	9.20E-4	8.41E-5	5.89E-5	1.06E-3	3.60E-5	2.12E-4	3.09E-6	-4.22E-4	8.92E-4
EP-T	mol N eq	1.04E-2	9.28E-4	6.22E-4	1.20E-2	3.97E-4	2.34E-3	2.05E-5	-4.70E-3	1.00E-2
POCP	kg NMVOC eq	3.60E-3	2.65E-4	1.78E-4	4.05E-3	1.13E-4	7.21E-4	6.59E-6	-2.09E-3	2.79E-3
ADP-mm	kg Sb eq	9.81E-5	1.04E-6	9.60E-7	1.00E-4	4.57E-7	2.85E-6	5.13E-9	-6.32E-6	9.71E-5
ADP-f	MJ	2.37E+1	6.21E-1	5.88E-1	2.49E+1	2.71E-1	2.53E+0	1.55E-2	-2.42E+1	3.58E+0
WDP	m3 depriv.	1.10E+0	2.22E-3	3.49E-1	1.45E+0	8.32E-4	5.76E-2	9.08E-5	-4.97E-1	1.02E+0
PM	disease inc.	4.40E-8	3.70E-9	3.04E-9	5.07E-8	1.59E-9	1.31E-8	1.06E-10	-2.27E-8	4.28E-8
IR	kBq U-235 eq	4.35E-2	2.60E-3	7.85E-4	4.68E-2	1.18E-3	8.91E-3	7.11E-5	-1.41E-2	4.29E-2
ETP-fw	CTUe	2.69E+2	5.54E-1	8.96E-1	2.71E+2	2.20E-1	6.02E+0	1.28E-2	-6.16E+0	2.71E+2
HTP-c	CTUh	4.42E-10	1.80E-11	3.84E-11	4.99E-10	7.83E-12	3.35E-10	3.82E-13	-1.52E-10	6.90E-10
HTP-nc	CTUh	1.28E-7	6.06E-10	9.44E-10	1.30E-7	2.62E-10	4.36E-9	7.70E-12	-4.55E-9	1.30E-7
SQP	Pt	4.91E+0	5.39E-1	5.71E-2	5.51E+0	2.32E-1	1.75E+0	3.97E-2	-8.02E+0	-4.85E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.15E+0	7.77E-3	1.93E+0	3.09E+0	3.89E-3	2.26E-1	5.74E-4	-1.65E+0	1.67E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.15E+0	7.77E-3	1.93E+0	3.09E+0	3.89E-3	2.26E-1	5.74E-4	-1.65E+0	1.67E+0
PENRE	MJ	2.54E+1	6.59E-1	6.40E-1	2.67E+1	2.88E-1	2.69E+0	1.64E-2	-2.60E+1	3.71E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.54E+1	6.59E-1	6.40E-1	2.67E+1	2.88E-1	2.69E+0	1.64E-2	-2.60E+1	3.71E+0
PET	MJ	2.66E+1	6.67E-1	2.57E+0	2.98E+1	2.92E-1	2.91E+0	1.70E-2	-2.77E+1	5.38E+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	2.50E-2	7.56E-5	8.22E-3	3.33E-2	3.07E-5	1.78E-3	1.90E-5	-8.07E-3	2.71E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.18E-5	1.57E-6	7.22E-7	1.41E-5	6.93E-7	5.57E-6	1.88E-8	-4.37E-6	1.60E-5
NHWD	kg	9.73E-2	3.94E-2	2.94E-3	1.40E-1	1.68E-2	1.22E-1	6.82E-2	-2.23E-2	3.24E-1
RWD	kg	4.72E-5	4.08E-6	1.03E-6	5.23E-5	1.84E-6	1.12E-5	1.01E-7	-1.26E-5	5.28E-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



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