

Environmental Profile

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

Ecochain v3.5.64



Product: 3080024 - AS+ Longsocket DN 70
 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	5.49E-1	1.91E-2	2.47E-2	5.93E-1	7.64E-3	2.92E-1	1.61E-3	-2.73E-1	6.20E-1
GWP-f	kg CO2 eq	5.48E-1	1.91E-2	2.01E-2	5.88E-1	7.64E-3	2.55E-1	1.61E-3	-3.54E-1	4.98E-1
GWP-b	kg CO2 eq	-2.39E-4	8.80E-6	3.01E-3	2.79E-3	4.64E-6	3.68E-2	3.09E-6	8.11E-2	1.21E-1
GWP-luluc	kg CO2 eq	7.60E-4	6.98E-6	1.55E-3	2.31E-3	2.70E-6	6.42E-5	6.34E-8	-6.39E-4	1.74E-3
ODP	kg CFC11 eq	4.85E-8	4.21E-9	2.30E-9	5.50E-8	1.76E-9	1.57E-8	9.22E-11	-1.51E-8	5.74E-8
AP	mol H+ eq	2.50E-3	1.10E-4	9.69E-5	2.70E-3	4.35E-5	3.83E-4	2.20E-6	-1.34E-3	1.79E-3
EP-fw	kg P eq	1.72E-5	1.92E-7	3.06E-7	1.77E-5	6.28E-8	3.19E-6	2.89E-9	-1.09E-5	1.01E-5
EP-m	kg N eq	5.15E-4	3.89E-5	2.54E-5	5.80E-4	1.56E-5	1.03E-4	1.38E-6	-2.53E-4	4.47E-4
EP-T	mol N eq	5.63E-3	4.29E-4	2.69E-4	6.33E-3	1.72E-4	1.14E-3	8.93E-6	-2.85E-3	4.80E-3
POCP	kg NMVOC eq	1.83E-3	1.23E-4	7.70E-5	2.03E-3	4.90E-5	3.50E-4	2.87E-6	-1.11E-3	1.33E-3
ADP-mm	kg Sb eq	4.66E-5	4.83E-7	4.14E-7	4.75E-5	1.98E-7	1.36E-6	2.23E-9	-3.25E-6	4.58E-5
ADP-f	MJ	1.14E+1	2.87E-1	2.54E-1	1.20E+1	1.17E-1	1.15E+0	6.73E-3	-1.11E+1	2.15E+0
WDP	m3 depriv.	5.04E-1	1.03E-3	1.51E-1	6.56E-1	3.60E-4	2.53E-2	3.94E-5	-3.07E-1	3.75E-1
PM	disease inc.	2.46E-8	1.71E-9	1.31E-9	2.76E-8	6.89E-10	6.11E-9	4.63E-11	-1.59E-8	1.86E-8
IR	kBq U-235 eq	2.24E-2	1.20E-3	3.39E-4	2.39E-2	5.12E-4	4.09E-3	3.09E-5	-1.01E-2	1.85E-2
ETP-fw	CTUe	1.24E+2	2.56E-1	3.87E-1	1.24E+2	9.52E-2	2.72E+0	5.68E-3	-7.54E+0	1.20E+2
HTP-c	CTUh	2.28E-10	8.31E-12	1.66E-11	2.52E-10	3.39E-12	1.53E-10	1.66E-13	-1.03E-10	3.06E-10
HTP-nc	CTUh	5.61E-8	2.80E-10	4.07E-10	5.68E-8	1.13E-10	1.99E-9	3.38E-12	-3.24E-9	5.56E-8
SQP	Pt	4.77E+0	2.49E-1	2.46E-2	5.04E+0	1.00E-1	7.88E-1	1.73E-2	-1.50E+1	-9.08E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.05E+0	3.60E-3	8.34E-1	1.88E+0	1.68E-3	9.88E-2	2.50E-4	-2.81E+0	-8.25E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.05E+0	3.60E-3	8.34E-1	1.88E+0	1.68E-3	9.88E-2	2.50E-4	-2.81E+0	-8.25E-1
PENRE	MJ	1.22E+1	3.05E-1	2.76E-1	1.28E+1	1.24E-1	1.22E+0	7.14E-3	-1.19E+1	2.26E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.22E+1	3.05E-1	2.76E-1	1.28E+1	1.24E-1	1.22E+0	7.14E-3	-1.19E+1	2.26E+0
PET	MJ	1.33E+1	3.09E-1	1.11E+0	1.47E+1	1.26E-1	1.32E+0	7.39E-3	-1.47E+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	1.18E-2	3.50E-5	3.55E-3	1.53E-2	1.33E-5	8.01E-4	8.25E-6	-5.90E-3	1.03E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.43E-6	7.28E-7	3.12E-7	7.47E-6	3.00E-7	2.56E-6	8.16E-9	-2.79E-6	7.54E-6
NHWD	kg	5.39E-2	1.82E-2	1.27E-3	7.34E-2	7.27E-3	5.51E-2	2.96E-2	-1.47E-2	1.51E-1
RWD	kg	2.44E-5	1.89E-6	4.47E-7	2.67E-5	7.97E-7	5.21E-6	4.38E-8	-9.29E-6	2.35E-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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