

Environmental Profile

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

Ecochain v3.5.64



Product: 3080103 - AS+ Socket Plug DN 100
 Unit: 1 piece
 Manufacturer: Wavin Germany Twist
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 49767 Twist
 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
 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

A1 Raw material supply A2 Transport A3 Manufacturing

Construction process stage

A4 Transport gate to site
 A5 Assembly / Construction installation process

Use stage

B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment
 B6 Operational energy use B7 Operational water use

End-of-Life stage

C1 De-construction demolition C2 Transport C3 Waste processing
 C4 Disposal

Benefits and loads beyond the system boundaries

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	5.01E-1	1.90E-2	2.56E-2	5.46E-1	7.82E-3	2.50E-1	1.54E-3	-2.89E-1	5.15E-1
GWP-f	kg CO2 eq	5.01E-1	1.89E-2	2.09E-2	5.41E-1	7.82E-3	2.28E-1	1.54E-3	-3.34E-1	4.44E-1
GWP-b	kg CO2 eq	-1.69E-4	8.74E-6	3.13E-3	2.96E-3	4.75E-6	2.11E-2	3.09E-6	4.50E-2	6.91E-2
GWP-luluc	kg CO2 eq	5.43E-4	6.94E-6	1.60E-3	2.15E-3	2.77E-6	6.58E-5	6.34E-8	-3.91E-4	1.83E-3
ODP	kg CFC11 eq	3.75E-8	4.18E-9	2.38E-9	4.41E-8	1.80E-9	1.58E-8	9.25E-11	-1.12E-8	5.05E-8
AP	mol H+ eq	2.20E-3	1.10E-4	1.00E-4	2.41E-3	4.45E-5	3.76E-4	2.20E-6	-1.20E-3	1.64E-3
EP-fw	kg P eq	1.43E-5	1.91E-7	3.18E-7	1.48E-5	6.43E-8	3.28E-6	2.89E-9	-7.93E-6	1.02E-5
EP-m	kg N eq	4.39E-4	3.87E-5	2.64E-5	5.04E-4	1.59E-5	9.89E-5	1.26E-6	-2.17E-4	4.02E-4
EP-T	mol N eq	4.87E-3	4.27E-4	2.78E-4	5.58E-3	1.76E-4	1.09E-3	8.95E-6	-2.43E-3	4.42E-3
POCP	kg NMVOC eq	1.61E-3	1.22E-4	7.98E-5	1.81E-3	5.02E-5	3.36E-4	2.86E-6	-1.02E-3	1.18E-3
ADP-mm	kg Sb eq	3.48E-5	4.80E-7	4.30E-7	3.57E-5	2.02E-7	1.33E-6	2.24E-9	-2.70E-6	3.46E-5
ADP-f	MJ	1.04E+1	2.86E-1	2.63E-1	1.10E+1	1.20E-1	1.16E+0	6.74E-3	-1.10E+1	1.28E+0
WDP	m3 depriv.	4.91E-1	1.02E-3	1.56E-1	6.48E-1	3.68E-4	2.58E-2	3.94E-5	-2.63E-1	4.11E-1
PM	disease inc.	2.02E-8	1.70E-9	1.36E-9	2.32E-8	7.06E-10	6.06E-9	4.64E-11	-1.28E-8	1.73E-8
IR	kBq U-235 eq	1.86E-2	1.20E-3	3.51E-4	2.02E-2	5.25E-4	4.10E-3	3.09E-5	-7.92E-3	1.69E-2
ETP-fw	CTUe	1.24E+2	2.55E-1	4.01E-1	1.24E+2	9.74E-2	2.71E+0	5.33E-3	-4.84E+0	1.22E+2
HTP-c	CTUh	1.99E-10	8.26E-12	1.72E-11	2.24E-10	3.47E-12	1.54E-10	1.66E-13	-8.36E-11	2.98E-10
HTP-nc	CTUh	5.76E-8	2.79E-10	4.22E-10	5.83E-8	1.16E-10	1.99E-9	3.28E-12	-2.58E-9	5.79E-8
SQP	Pt	3.18E+0	2.48E-1	2.55E-2	3.45E+0	1.03E-1	8.00E-1	1.73E-2	-8.58E+0	-4.20E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.22E-1	3.58E-3	8.64E-1	1.59E+0	1.72E-3	1.02E-1	2.49E-4	-1.64E+0	4.92E-2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	7.22E-1	3.58E-3	8.64E-1	1.59E+0	1.72E-3	1.02E-1	2.49E-4	-1.64E+0	4.92E-2
PENRE	MJ	1.12E+1	3.03E-1	2.87E-1	1.17E+1	1.27E-1	1.23E+0	7.16E-3	-1.18E+1	1.33E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.12E+1	3.03E-1	2.87E-1	1.17E+1	1.27E-1	1.23E+0	7.16E-3	-1.18E+1	1.33E+0
PET	MJ	1.19E+1	3.07E-1	1.15E+0	1.33E+1	1.29E-1	1.33E+0	7.41E-3	-1.34E+1	1.38E+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	1.12E-2	3.48E-5	3.68E-3	1.49E-2	1.36E-5	7.79E-4	8.27E-6	-4.65E-3	1.11E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.37E-6	7.24E-7	3.23E-7	6.42E-6	3.07E-7	2.55E-6	8.18E-9	-2.13E-6	7.15E-6
NHWD	kg	4.60E-2	1.81E-2	1.32E-3	6.54E-2	7.44E-3	5.51E-2	2.97E-2	-1.21E-2	1.46E-1
RWD	kg	1.96E-5	1.88E-6	4.63E-7	2.19E-5	8.16E-7	5.19E-6	4.39E-8	-7.15E-6	2.08E-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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