

# Environmental Profile

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

Ecochain v3.5.64



Product: 3080104 - AS+ Socket Plug DN 125  
 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	6.28E-1	2.34E-2	3.12E-2	6.82E-1	9.51E-3	3.14E-1	1.87E-3	-3.42E-1	6.66E-1
GWP-f	kg CO2 eq	6.27E-1	2.34E-2	2.54E-2	6.76E-1	9.50E-3	2.80E-1	1.86E-3	-4.17E-1	5.50E-1
GWP-b	kg CO2 eq	1.27E-4	1.08E-5	3.81E-3	3.95E-3	5.77E-6	3.47E-2	3.75E-6	7.56E-2	1.14E-1
GWP-luluc	kg CO2 eq	7.78E-4	8.56E-6	1.95E-3	2.74E-3	3.36E-6	8.05E-5	7.74E-8	-6.20E-4	2.20E-3
ODP	kg CFC11 eq	4.77E-8	5.16E-9	2.90E-9	5.58E-8	2.19E-9	1.95E-8	1.12E-10	-1.51E-8	6.25E-8
AP	mol H+ eq	2.78E-3	1.35E-4	1.22E-4	3.04E-3	5.41E-5	4.67E-4	2.68E-6	-1.55E-3	2.01E-3
EP-fw	kg P eq	1.87E-5	2.36E-7	3.87E-7	1.93E-5	7.82E-8	4.02E-6	3.52E-9	-1.14E-5	1.20E-5
EP-m	kg N eq	5.69E-4	4.77E-5	3.21E-5	6.49E-4	1.94E-5	1.24E-4	1.52E-6	-2.87E-4	5.07E-4
EP-T	mol N eq	6.27E-3	5.26E-4	3.40E-4	7.13E-3	2.13E-4	1.37E-3	1.09E-5	-3.22E-3	5.51E-3
POCP	kg NMVOC eq	2.02E-3	1.50E-4	9.74E-5	2.27E-3	6.10E-5	4.21E-4	3.48E-6	-1.30E-3	1.45E-3
ADP-mm	kg Sb eq	4.19E-5	5.92E-7	5.24E-7	4.30E-5	2.46E-7	1.66E-6	2.72E-9	-3.41E-6	4.15E-5
ADP-f	MJ	1.29E+1	3.52E-1	3.21E-1	1.35E+1	1.46E-1	1.42E+0	8.20E-3	-1.35E+1	1.58E+0
WDP	m3 depriv.	6.04E-1	1.26E-3	1.90E-1	7.95E-1	4.48E-4	3.15E-2	4.89E-5	-3.49E-1	4.78E-1
PM	disease inc.	2.61E-8	2.10E-9	1.66E-9	2.98E-8	8.58E-10	7.53E-9	5.65E-11	-1.75E-8	2.08E-8
IR	kBq U-235 eq	2.33E-2	1.48E-3	4.28E-4	2.52E-2	6.38E-4	5.07E-3	3.76E-5	-1.09E-2	2.01E-2
ETP-fw	CTUe	1.53E+2	3.14E-1	4.89E-1	1.54E+2	1.18E-1	3.34E+0	6.45E-3	-7.46E+0	1.50E+2
HTP-c	CTUh	2.53E-10	1.02E-11	2.09E-11	2.84E-10	4.21E-12	1.91E-10	2.02E-13	-1.14E-10	3.66E-10
HTP-nc	CTUh	7.05E-8	3.44E-10	5.15E-10	7.14E-8	1.41E-10	2.45E-9	3.99E-12	-3.54E-9	7.04E-8
SQP	Pt	4.70E+0	3.06E-1	3.11E-2	5.03E+0	1.25E-1	9.84E-1	2.11E-2	-1.42E+1	-8.00E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.05E+0	4.41E-3	1.05E+0	2.11E+0	2.09E-3	1.25E-1	3.02E-4	-2.68E+0	-4.42E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.05E+0	4.41E-3	1.05E+0	2.11E+0	2.09E-3	1.25E-1	3.02E-4	-2.68E+0	-4.42E-1
PENRE	MJ	1.38E+1	3.74E-1	3.49E-1	1.45E+1	1.55E-1	1.52E+0	8.70E-3	-1.45E+1	1.65E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.38E+1	3.74E-1	3.49E-1	1.45E+1	1.55E-1	1.52E+0	8.70E-3	-1.45E+1	1.65E+0
PET	MJ	1.48E+1	3.78E-1	1.40E+0	1.66E+1	1.57E-1	1.64E+0	9.00E-3	-1.72E+1	1.21E+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	1.39E-2	4.29E-5	4.48E-3	1.84E-2	1.65E-5	9.55E-4	1.01E-5	-6.43E-3	1.30E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.93E-6	8.93E-7	3.94E-7	8.22E-6	3.73E-7	3.15E-6	9.96E-9	-2.85E-6	8.90E-6
NHWD	kg	5.97E-2	2.23E-2	1.61E-3	8.37E-2	9.04E-3	6.79E-2	3.61E-2	-1.64E-2	1.80E-1
RWD	kg	2.45E-5	2.31E-6	5.65E-7	2.73E-5	9.92E-7	6.44E-6	5.33E-8	-9.92E-6	2.49E-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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