

Environmental Profile

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

Ecochain v3.5.64



Product: 3080107 - AS+ Socket Plug DN 70
 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					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	2.03E-1	7.27E-3	9.30E-3	2.19E-1	2.92E-3	1.02E-1	5.91E-4	-1.03E-1	2.22E-1
GWP-f	kg CO2 eq	2.02E-1	7.26E-3	7.58E-3	2.17E-1	2.92E-3	8.80E-2	5.90E-4	-1.33E-1	1.76E-1
GWP-b	kg CO2 eq	8.27E-5	3.35E-6	1.14E-3	1.22E-3	1.77E-6	1.38E-2	1.15E-6	3.04E-2	4.54E-2
GWP-luluc	kg CO2 eq	2.82E-4	2.66E-6	5.82E-4	8.67E-4	1.03E-6	2.48E-5	2.42E-8	-2.40E-4	6.53E-4
ODP	kg CFC11 eq	1.62E-8	1.60E-9	8.66E-10	1.87E-8	6.73E-10	6.01E-9	3.46E-11	-5.26E-9	2.01E-8
AP	mol H+ eq	9.18E-4	4.21E-5	3.65E-5	9.97E-4	1.66E-5	1.46E-4	8.26E-7	-5.12E-4	6.49E-4
EP-fw	kg P eq	6.33E-6	7.32E-8	1.15E-7	6.52E-6	2.40E-8	1.23E-6	1.09E-9	-4.14E-6	3.63E-6
EP-m	kg N eq	1.90E-4	1.48E-5	9.58E-6	2.15E-4	5.96E-6	3.93E-5	4.74E-7	-9.62E-5	1.64E-4
EP-T	mol N eq	2.08E-3	1.64E-4	1.01E-4	2.35E-3	6.56E-5	4.34E-4	3.35E-6	-1.08E-3	1.77E-3
POCP	kg NMVOC eq	6.61E-4	4.67E-5	2.90E-5	7.37E-4	1.88E-5	1.33E-4	1.07E-6	-4.23E-4	4.67E-4
ADP-mm	kg Sb eq	1.40E-5	1.84E-7	1.56E-7	1.43E-5	7.56E-8	5.24E-7	8.42E-10	-1.10E-6	1.38E-5
ADP-f	MJ	4.12E+0	1.09E-1	9.56E-2	4.33E+0	4.49E-2	4.42E-1	2.52E-3	-4.24E+0	5.78E-1
WDP	m3 depriv.	1.89E-1	3.92E-4	5.67E-2	2.47E-1	1.38E-4	9.66E-3	1.63E-5	-1.18E-1	1.39E-1
PM	disease inc.	8.82E-9	6.52E-10	4.95E-10	9.96E-9	2.64E-10	2.35E-9	1.74E-11	-6.04E-9	6.55E-9
IR	kBq U-235 eq	7.72E-3	4.59E-4	1.28E-4	8.31E-3	1.96E-4	1.58E-3	1.16E-5	-3.80E-3	6.29E-3
ETP-fw	CTUe	4.72E+1	9.76E-2	1.46E-1	4.74E+1	3.64E-2	1.02E+0	2.01E-3	-2.84E+0	4.56E+1
HTP-c	CTUh	8.42E-11	3.17E-12	6.24E-12	9.36E-11	1.30E-12	6.01E-11	6.32E-14	-3.92E-11	1.16E-10
HTP-nc	CTUh	2.14E-8	1.07E-10	1.53E-10	2.17E-8	4.34E-11	7.62E-10	1.24E-12	-1.23E-9	2.12E-8
SQP	Pt	1.75E+0	9.50E-2	9.28E-3	1.86E+0	3.84E-2	3.05E-1	6.47E-3	-5.63E+0	-3.43E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.87E-1	1.37E-3	3.14E-1	7.02E-1	6.43E-4	3.80E-2	9.24E-5	-1.06E+0	-3.14E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.87E-1	1.37E-3	3.14E-1	7.02E-1	6.43E-4	3.80E-2	9.24E-5	-1.06E+0	-3.14E-1
PENRE	MJ	4.42E+0	1.16E-1	1.04E-1	4.64E+0	4.76E-2	4.70E-1	2.68E-3	-4.56E+0	6.05E-1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.42E+0	1.16E-1	1.04E-1	4.64E+0	4.76E-2	4.70E-1	2.68E-3	-4.56E+0	6.05E-1
PET	MJ	4.81E+0	1.18E-1	4.18E-1	5.34E+0	4.83E-2	5.08E-1	2.77E-3	-5.61E+0	2.91E-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	4.40E-3	1.33E-5	1.34E-3	5.75E-3	5.08E-6	2.94E-4	3.09E-6	-2.24E-3	3.81E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.34E-6	2.77E-7	1.17E-7	2.73E-6	1.15E-7	9.78E-7	3.08E-9	-9.86E-7	2.84E-6
NHWD	kg	2.01E-2	6.94E-3	4.79E-4	2.75E-2	2.78E-3	2.11E-2	1.11E-2	-5.60E-3	5.69E-2
RWD	kg	8.14E-6	7.19E-7	1.68E-7	9.02E-6	3.05E-7	2.01E-6	1.64E-8	-3.48E-6	7.88E-6
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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