

Environmental Profile

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

Ecochain v3.5.64



Product: 3080015 - AS+ Double Socket coupler DN 200
 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	2.43E+0	8.17E-2	1.10E-1	2.62E+0	3.52E-2	1.39E+0	8.12E-3	-1.42E+0	2.63E+0
GWP-f	kg CO2 eq	2.44E+0	8.17E-2	8.95E-2	2.61E+0	3.52E-2	1.34E+0	8.12E-3	-1.52E+0	2.47E+0
GWP-b	kg CO2 eq	-8.70E-3	3.77E-5	1.34E-2	4.75E-3	2.14E-5	5.09E-2	1.48E-5	1.03E-1	1.58E-1
GWP-luluc	kg CO2 eq	2.12E-3	2.99E-5	6.87E-3	9.03E-3	1.25E-5	2.82E-4	3.02E-7	-1.06E-3	8.26E-3
ODP	kg CFC11 eq	2.41E-7	1.80E-8	1.02E-8	2.69E-7	8.11E-9	6.71E-8	4.38E-10	-5.86E-8	2.86E-7
AP	mol H+ eq	1.11E-2	4.74E-4	4.31E-4	1.20E-2	2.01E-4	1.62E-3	1.05E-5	-4.85E-3	9.02E-3
EP-fw	kg P eq	6.83E-5	8.24E-7	1.36E-6	7.05E-5	2.90E-7	1.41E-5	1.37E-8	-2.67E-5	5.82E-5
EP-m	kg N eq	2.06E-3	1.67E-4	1.13E-4	2.34E-3	7.18E-5	4.29E-4	7.38E-6	-8.72E-4	1.98E-3
EP-T	mol N eq	2.33E-2	1.84E-3	1.19E-3	2.63E-2	7.91E-4	4.74E-3	4.25E-5	-9.72E-3	2.22E-2
POCP	kg NMVOC eq	8.29E-3	5.25E-4	3.43E-4	9.16E-3	2.26E-4	1.45E-3	1.38E-5	-4.23E-3	6.62E-3
ADP-mm	kg Sb eq	2.93E-4	2.07E-6	1.84E-6	2.97E-4	9.11E-7	5.59E-6	1.06E-8	-1.58E-5	2.88E-4
ADP-f	MJ	5.38E+1	1.23E+0	1.13E+0	5.61E+1	5.41E-1	4.93E+0	3.20E-2	-4.86E+1	1.30E+1
WDP	m3 depriv.	2.30E+0	4.41E-3	6.70E-1	2.98E+0	1.66E-3	1.14E-1	1.84E-4	-1.00E+0	2.09E+0
PM	disease inc.	1.06E-7	7.33E-9	5.84E-9	1.19E-7	3.18E-9	2.56E-8	2.20E-10	-4.70E-8	1.01E-7
IR	kBq U-235 eq	1.09E-1	5.16E-3	1.51E-3	1.15E-1	2.36E-3	1.74E-2	1.47E-4	-3.01E-2	1.05E-1
ETP-fw	CTUe	5.27E+2	1.10E+0	1.72E+0	5.30E+2	4.39E-1	1.21E+1	2.94E-2	-1.43E+1	5.28E+2
HTP-c	CTUh	1.01E-9	3.56E-11	7.37E-11	1.12E-9	1.56E-11	6.51E-10	7.91E-13	-3.20E-10	1.46E-9
HTP-nc	CTUh	2.50E-7	1.20E-9	1.81E-9	2.53E-7	5.23E-10	8.63E-9	1.67E-11	-9.49E-9	2.53E-7
SQP	Pt	1.22E+1	1.07E+0	1.10E-1	1.34E+1	4.62E-1	3.41E+0	8.20E-2	-2.07E+1	-3.35E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.76E+0	1.54E-2	3.71E+0	6.48E+0	7.75E-3	4.37E-1	1.21E-3	-4.13E+0	2.80E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.76E+0	1.54E-2	3.71E+0	6.48E+0	7.75E-3	4.37E-1	1.21E-3	-4.13E+0	2.80E+0
PENRE	MJ	5.75E+1	1.31E+0	1.23E+0	6.01E+1	5.74E-1	5.25E+0	3.39E-2	-5.23E+1	1.36E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.75E+1	1.31E+0	1.23E+0	6.01E+1	5.74E-1	5.25E+0	3.39E-2	-5.23E+1	1.36E+1
PET	MJ	6.03E+1	1.32E+0	4.94E+0	6.66E+1	5.82E-1	5.68E+0	3.51E-2	-5.64E+1	1.64E+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	5.29E-2	1.50E-4	1.58E-2	6.88E-2	6.12E-5	3.79E-3	3.93E-5	-1.68E-2	5.59E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.77E-5	3.12E-6	1.39E-6	3.22E-5	1.38E-6	1.10E-5	3.87E-8	-1.10E-5	3.36E-5
NHWD	kg	2.18E-1	7.81E-2	5.65E-3	3.02E-1	3.35E-2	2.42E-1	1.41E-1	-4.63E-2	6.71E-1
RWD	kg	1.24E-4	8.09E-6	1.99E-6	1.34E-4	3.68E-6	2.19E-5	2.08E-7	-2.78E-5	1.32E-4
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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