

Environmental Profile

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

Ecochain v3.5.64



Product: 3080092 - AS+ Repaircoupler DN 50
 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	2.61E-1	8.23E-3	1.03E-2	2.80E-1	3.40E-3	1.52E-1	8.17E-4	-1.31E-1	3.06E-1
GWP-f	kg CO2 eq	2.62E-1	8.23E-3	8.36E-3	2.78E-1	3.40E-3	1.39E-1	8.16E-4	-1.61E-1	2.60E-1
GWP-b	kg CO2 eq	-7.05E-4	3.80E-6	1.25E-3	5.51E-4	2.07E-6	1.38E-2	1.44E-6	3.04E-2	4.47E-2
GWP-luluc	kg CO2 eq	3.26E-4	3.02E-6	6.42E-4	9.71E-4	1.20E-6	2.74E-5	2.98E-8	-2.44E-4	7.56E-4
ODP	kg CFC11 eq	2.74E-8	1.82E-9	9.55E-10	3.02E-8	7.84E-10	6.67E-9	4.27E-11	-7.55E-9	3.01E-8
AP	mol H+ eq	1.23E-3	4.77E-5	4.02E-5	1.32E-3	1.94E-5	1.66E-4	1.02E-6	-5.64E-4	9.41E-4
EP-fw	kg P eq	8.16E-6	8.30E-8	1.27E-7	8.37E-6	2.80E-8	1.36E-6	1.35E-9	-4.34E-6	5.42E-6
EP-m	kg N eq	2.41E-4	1.68E-5	1.06E-5	2.69E-4	6.93E-6	4.51E-5	7.42E-7	-1.07E-4	2.15E-4
EP-T	mol N eq	2.67E-3	1.85E-4	1.12E-4	2.96E-3	7.64E-5	4.97E-4	4.15E-6	-1.20E-3	2.34E-3
POCP	kg NMVOC eq	9.09E-4	5.29E-5	3.20E-5	9.94E-4	2.18E-5	1.51E-4	1.35E-6	-4.72E-4	6.96E-4
ADP-mm	kg Sb eq	3.13E-5	2.08E-7	1.72E-7	3.17E-5	8.80E-8	5.77E-7	1.04E-9	-1.74E-6	3.06E-5
ADP-f	MJ	5.67E+0	1.24E-1	1.05E-1	5.90E+0	5.22E-2	4.90E-1	3.12E-3	-4.91E+0	1.54E+0
WDP	m3 depriv.	2.33E-1	4.44E-4	6.26E-2	2.96E-1	1.60E-4	1.11E-2	1.91E-5	-1.26E-1	1.82E-1
PM	disease inc.	1.24E-8	7.39E-10	5.46E-10	1.36E-8	3.07E-10	2.60E-9	2.14E-11	-6.45E-9	1.01E-8
IR	kBq U-235 eq	1.20E-2	5.20E-4	1.41E-4	1.26E-2	2.28E-4	1.74E-3	1.44E-5	-4.19E-3	1.04E-2
ETP-fw	CTUe	5.26E+1	1.11E-1	1.61E-1	5.28E+1	4.24E-2	1.19E+0	2.94E-3	-2.93E+0	5.12E+1
HTP-c	CTUh	1.12E-10	3.59E-12	6.88E-12	1.23E-10	1.51E-12	6.59E-11	7.82E-14	-4.29E-11	1.47E-10
HTP-nc	CTUh	2.41E-8	1.21E-10	1.69E-10	2.44E-8	5.05E-11	8.63E-10	1.66E-12	-1.32E-9	2.40E-8
SQP	Pt	2.05E+0	1.08E-1	1.02E-2	2.17E+0	4.47E-2	3.37E-1	7.99E-3	-5.66E+0	-3.10E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.46E-1	1.55E-3	3.46E-1	7.94E-1	7.49E-4	4.21E-2	1.18E-4	-1.06E+0	-2.26E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.46E-1	1.55E-3	3.46E-1	7.94E-1	7.49E-4	4.21E-2	1.18E-4	-1.06E+0	-2.26E-1
PENRE	MJ	6.07E+0	1.32E-1	1.15E-1	6.32E+0	5.54E-2	5.21E-1	3.31E-3	-5.28E+0	1.62E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.07E+0	1.32E-1	1.15E-1	6.32E+0	5.54E-2	5.21E-1	3.31E-3	-5.28E+0	1.62E+0
PET	MJ	6.51E+0	1.33E-1	4.61E-1	7.11E+0	5.62E-2	5.63E-1	3.43E-3	-6.34E+0	1.39E+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	5.48E-3	1.51E-5	1.47E-3	6.97E-3	5.91E-6	3.78E-4	3.83E-6	-2.38E-3	4.97E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.20E-6	3.14E-7	1.30E-7	3.64E-6	1.34E-7	1.10E-6	3.79E-9	-1.39E-6	3.50E-6
NHWD	kg	2.55E-2	7.87E-3	5.28E-4	3.39E-2	3.24E-3	2.41E-2	1.37E-2	-6.09E-3	6.89E-2
RWD	kg	1.37E-5	8.15E-7	1.86E-7	1.47E-5	3.55E-7	2.21E-6	2.03E-8	-3.91E-6	1.34E-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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