

Environmental Profile

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

Ecochain v3.5.64



Product: 3080090 - AS+ Repaircoupler DN 150
 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	1.49E+0	4.90E-2	6.56E-2	1.60E+0	2.13E-2	8.66E-1	5.03E-3	-8.71E-1	1.62E+0
GWP-f	kg CO2 eq	1.49E+0	4.90E-2	5.35E-2	1.60E+0	2.13E-2	8.39E-1	5.03E-3	-9.24E-1	1.54E+0
GWP-b	kg CO2 eq	-6.03E-3	2.26E-5	8.02E-3	2.01E-3	1.29E-5	2.70E-2	9.01E-6	5.35E-2	8.24E-2
GWP-luluc	kg CO2 eq	1.26E-3	1.79E-5	4.11E-3	5.39E-3	7.53E-6	1.69E-4	1.84E-7	-5.78E-4	4.98E-3
ODP	kg CFC11 eq	1.53E-7	1.08E-8	6.11E-9	1.70E-7	4.90E-9	4.01E-8	2.67E-10	-3.63E-8	1.79E-7
AP	mol H+ eq	6.86E-3	2.84E-4	2.58E-4	7.40E-3	1.21E-4	9.75E-4	6.38E-6	-2.88E-3	5.62E-3
EP-fw	kg P eq	4.18E-5	4.94E-7	8.15E-7	4.31E-5	1.75E-7	8.42E-6	8.38E-9	-1.54E-5	3.63E-5
EP-m	kg N eq	1.26E-3	1.00E-4	6.76E-5	1.42E-3	4.34E-5	2.57E-4	4.62E-6	-5.18E-4	1.21E-3
EP-T	mol N eq	1.42E-2	1.10E-3	7.14E-4	1.60E-2	4.78E-4	2.85E-3	2.59E-5	-5.77E-3	1.36E-2
POCP	kg NMVOC eq	5.12E-3	3.15E-4	2.05E-4	5.64E-3	1.37E-4	8.67E-4	8.40E-6	-2.53E-3	4.13E-3
ADP-mm	kg Sb eq	1.91E-4	1.24E-6	1.10E-6	1.93E-4	5.50E-7	3.34E-6	6.45E-9	-9.94E-6	1.87E-4
ADP-f	MJ	3.32E+1	7.39E-1	6.75E-1	3.46E+1	3.27E-1	2.95E+0	1.95E-2	-2.93E+1	8.59E+0
WDP	m3 depriv.	1.40E+0	2.64E-3	4.00E-1	1.80E+0	1.00E-3	6.88E-2	1.12E-4	-5.91E-1	1.28E+0
PM	disease inc.	6.55E-8	4.40E-9	3.49E-9	7.34E-8	1.92E-9	1.53E-8	1.34E-10	-2.75E-8	6.33E-8
IR	kBq U-235 eq	6.82E-2	3.09E-3	9.00E-4	7.22E-2	1.43E-3	1.04E-2	8.98E-5	-1.77E-2	6.63E-2
ETP-fw	CTUe	3.15E+2	6.59E-1	1.03E+0	3.17E+2	2.65E-1	7.27E+0	1.83E-2	-8.00E+0	3.16E+2
HTP-c	CTUh	6.20E-10	2.14E-11	4.40E-11	6.86E-10	9.44E-12	3.90E-10	4.83E-13	-1.89E-10	8.96E-10
HTP-nc	CTUh	1.50E-7	7.20E-10	1.08E-9	1.52E-7	3.16E-10	5.18E-9	1.03E-11	-5.55E-9	1.52E-7
SQP	Pt	7.22E+0	6.41E-1	6.55E-2	7.93E+0	2.79E-1	2.04E+0	4.99E-2	-1.10E+1	-6.56E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.63E+0	9.25E-3	2.22E+0	3.85E+0	4.69E-3	2.62E-1	7.38E-4	-2.21E+0	1.91E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.63E+0	9.25E-3	2.22E+0	3.85E+0	4.69E-3	2.62E-1	7.38E-4	-2.21E+0	1.91E+0
PENRE	MJ	3.55E+1	7.84E-1	7.35E-1	3.70E+1	3.47E-1	3.14E+0	2.07E-2	-3.16E+1	8.99E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.55E+1	7.84E-1	7.35E-1	3.70E+1	3.47E-1	3.14E+0	2.07E-2	-3.16E+1	8.99E+0
PET	MJ	3.71E+1	7.93E-1	2.95E+0	4.09E+1	3.51E-1	3.40E+0	2.14E-2	-3.38E+1	1.09E+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	3.22E-2	9.00E-5	9.43E-3	4.18E-2	3.70E-5	2.32E-3	2.39E-5	-9.80E-3	3.43E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.71E-5	1.87E-6	8.29E-7	1.98E-5	8.35E-7	6.60E-6	2.36E-8	-6.77E-6	2.05E-5
NHWD	kg	1.33E-1	4.69E-2	3.38E-3	1.83E-1	2.02E-2	1.45E-1	8.57E-2	-2.73E-2	4.07E-1
RWD	kg	7.85E-5	4.85E-6	1.19E-6	8.45E-5	2.22E-6	1.31E-5	1.27E-7	-1.64E-5	8.36E-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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