

Environmental Profile

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

Ecochain v3.5.64



Product: 3080093 - AS+ Repaircoupler DN 70
 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	3.50E-1	1.11E-2	1.45E-2	3.75E-1	4.78E-3	2.06E-1	1.15E-3	-1.93E-1	3.94E-1
GWP-f	kg CO2 eq	3.51E-1	1.11E-2	1.18E-2	3.74E-1	4.77E-3	1.95E-1	1.15E-3	-2.15E-1	3.60E-1
GWP-b	kg CO2 eq	-1.35E-3	5.14E-6	1.77E-3	4.24E-4	2.90E-6	1.06E-2	2.03E-6	2.24E-2	3.35E-2
GWP-luluc	kg CO2 eq	3.47E-4	4.08E-6	9.09E-4	1.26E-3	1.69E-6	3.79E-5	4.17E-8	-2.02E-4	1.10E-3
ODP	kg CFC11 eq	3.71E-8	2.46E-9	1.35E-9	4.09E-8	1.10E-9	9.09E-9	6.01E-11	-9.24E-9	4.19E-8
AP	mol H+ eq	1.63E-3	6.45E-5	5.70E-5	1.76E-3	2.72E-5	2.23E-4	1.44E-6	-6.96E-4	1.31E-3
EP-fw	kg P eq	1.03E-5	1.12E-7	1.80E-7	1.06E-5	3.93E-8	1.89E-6	1.90E-9	-4.34E-6	8.15E-6
EP-m	kg N eq	3.06E-4	2.27E-5	1.50E-5	3.43E-4	9.73E-6	5.97E-5	1.07E-6	-1.28E-4	2.86E-4
EP-T	mol N eq	3.43E-3	2.51E-4	1.58E-4	3.84E-3	1.07E-4	6.59E-4	5.84E-6	-1.43E-3	3.18E-3
POCP	kg NMVOC eq	1.22E-3	7.16E-5	4.53E-5	1.33E-3	3.06E-5	2.00E-4	1.90E-6	-5.99E-4	9.67E-4
ADP-mm	kg Sb eq	4.54E-5	2.82E-7	2.44E-7	4.59E-5	1.23E-7	7.67E-7	1.46E-9	-2.36E-6	4.45E-5
ADP-f	MJ	7.76E+0	1.68E-1	1.49E-1	8.08E+0	7.33E-2	6.68E-1	4.39E-3	-6.69E+0	2.14E+0
WDP	m3 depriv.	3.21E-1	6.00E-4	8.85E-2	4.10E-1	2.25E-4	1.55E-2	2.58E-5	-1.47E-1	2.79E-1
PM	disease inc.	1.60E-8	9.99E-10	7.72E-10	1.78E-8	4.31E-10	3.49E-9	3.02E-11	-7.15E-9	1.46E-8
IR	kBq U-235 eq	1.63E-2	7.03E-4	1.99E-4	1.72E-2	3.20E-4	2.36E-3	2.03E-5	-4.64E-3	1.53E-2
ETP-fw	CTUe	7.14E+1	1.50E-1	2.27E-1	7.18E+1	5.95E-2	1.65E+0	4.20E-3	-2.59E+0	7.09E+1
HTP-c	CTUh	1.48E-10	4.85E-12	9.74E-12	1.63E-10	2.12E-12	8.88E-11	1.10E-13	-4.85E-11	2.05E-10
HTP-nc	CTUh	3.36E-8	1.64E-10	2.40E-10	3.40E-8	7.09E-11	1.18E-9	2.34E-12	-1.45E-9	3.38E-8
SQP	Pt	2.08E+0	1.46E-1	1.45E-2	2.24E+0	6.27E-2	4.61E-1	1.13E-2	-4.33E+0	-1.55E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.61E-1	2.10E-3	4.90E-1	9.53E-1	1.05E-3	5.85E-2	1.67E-4	-8.36E-1	1.77E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.61E-1	2.10E-3	4.90E-1	9.53E-1	1.05E-3	5.85E-2	1.67E-4	-8.36E-1	1.77E-1
PENRE	MJ	8.31E+0	1.78E-1	1.63E-1	8.65E+0	7.78E-2	7.11E-1	4.66E-3	-7.20E+0	2.24E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	8.31E+0	1.78E-1	1.63E-1	8.65E+0	7.78E-2	7.11E-1	4.66E-3	-7.20E+0	2.24E+0
PET	MJ	8.77E+0	1.80E-1	6.53E-1	9.60E+0	7.88E-2	7.69E-1	4.83E-3	-8.04E+0	2.41E+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	7.46E-3	2.04E-5	2.09E-3	9.57E-3	8.29E-6	5.27E-4	5.39E-6	-2.59E-3	7.52E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.15E-6	4.25E-7	1.83E-7	4.76E-6	1.87E-7	1.50E-6	5.32E-9	-1.71E-6	4.74E-6
NHWD	kg	3.24E-2	1.06E-2	7.47E-4	4.38E-2	4.54E-3	3.30E-2	1.93E-2	-6.95E-3	9.37E-2
RWD	kg	1.88E-5	1.10E-6	2.63E-7	2.02E-5	4.98E-7	2.98E-6	2.86E-8	-4.32E-6	1.94E-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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