

Environmental Profile

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

Ecochain v3.5.64



Product: 3080081 - AS+ Reducer DN 125x100 short
 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
 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

A1 Raw material supply A2 Transport A3 Manufacturing

Construction process stage

A4 Transport gate to site
 A5 Assembly / Construction installation process

Use stage

B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment
 B6 Operational energy use B7 Operational water use

End-of-Life stage

C1 De-construction demolition C2 Transport C3 Waste processing
 C4 Disposal

Benefits and loads beyond the system boundaries

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	7.16E-1	2.47E-2	3.20E-2	7.73E-1	1.01E-2	3.87E-1	2.16E-3	-3.69E-1	8.03E-1
GWP-f	kg CO2 eq	7.16E-1	2.47E-2	2.61E-2	7.67E-1	1.00E-2	3.46E-1	2.16E-3	-4.59E-1	6.65E-1
GWP-b	kg CO2 eq	-7.37E-4	1.14E-5	3.91E-3	3.18E-3	6.10E-6	4.15E-2	4.10E-6	9.10E-2	1.36E-1
GWP-luluc	kg CO2 eq	9.20E-4	9.06E-6	2.00E-3	2.93E-3	3.56E-6	8.36E-5	8.41E-8	-7.32E-4	2.29E-3
ODP	kg CFC11 eq	6.47E-8	5.46E-9	2.98E-9	7.31E-8	2.32E-9	2.03E-8	1.22E-10	-1.92E-8	7.67E-8
AP	mol H+ eq	3.26E-3	1.43E-4	1.26E-4	3.53E-3	5.72E-5	4.96E-4	2.91E-6	-1.68E-3	2.40E-3
EP-fw	kg P eq	2.20E-5	2.49E-7	3.97E-7	2.27E-5	8.27E-8	4.16E-6	3.83E-9	-1.30E-5	1.39E-5
EP-m	kg N eq	6.60E-4	5.05E-5	3.29E-5	7.44E-4	2.05E-5	1.33E-4	1.87E-6	-3.16E-4	5.84E-4
EP-T	mol N eq	7.26E-3	5.57E-4	3.48E-4	8.16E-3	2.26E-4	1.47E-3	1.18E-5	-3.55E-3	6.32E-3
POCP	kg NMVOC eq	2.40E-3	1.59E-4	9.98E-5	2.66E-3	6.45E-5	4.50E-4	3.81E-6	-1.40E-3	1.77E-3
ADP-mm	kg Sb eq	6.57E-5	6.26E-7	5.37E-7	6.68E-5	2.60E-7	1.75E-6	2.96E-9	-4.34E-6	6.45E-5
ADP-f	MJ	1.51E+1	3.73E-1	3.29E-1	1.58E+1	1.54E-1	1.49E+0	8.91E-3	-1.44E+1	3.00E+0
WDP	m3 depriv.	6.62E-1	1.33E-3	1.95E-1	8.59E-1	4.73E-4	3.32E-2	5.22E-5	-3.80E-1	5.13E-1
PM	disease inc.	3.19E-8	2.22E-9	1.70E-9	3.58E-8	9.07E-10	7.89E-9	6.13E-11	-1.94E-8	2.53E-8
IR	kBq U-235 eq	2.97E-2	1.56E-3	4.39E-4	3.17E-2	6.74E-4	5.30E-3	4.10E-5	-1.23E-2	2.54E-2
ETP-fw	CTUe	1.60E+2	3.32E-1	5.01E-1	1.61E+2	1.25E-1	3.55E+0	7.65E-3	-8.74E+0	1.56E+2
HTP-c	CTUh	2.97E-10	1.08E-11	2.15E-11	3.29E-10	4.46E-12	1.99E-10	2.20E-13	-1.27E-10	4.06E-10
HTP-nc	CTUh	7.34E-8	3.64E-10	5.28E-10	7.42E-8	1.49E-10	2.58E-9	4.51E-12	-3.94E-9	7.30E-8
SQP	Pt	5.71E+0	3.23E-1	3.19E-2	6.06E+0	1.32E-1	1.02E+0	2.29E-2	-1.70E+1	-9.72E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.26E+0	4.67E-3	1.08E+0	2.34E+0	2.21E-3	1.29E-1	3.33E-4	-3.19E+0	-7.14E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.26E+0	4.67E-3	1.08E+0	2.34E+0	2.21E-3	1.29E-1	3.33E-4	-3.19E+0	-7.14E-1
PENRE	MJ	1.62E+1	3.96E-1	3.58E-1	1.69E+1	1.64E-1	1.58E+0	9.45E-3	-1.55E+1	3.14E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.62E+1	3.96E-1	3.58E-1	1.69E+1	1.64E-1	1.58E+0	9.45E-3	-1.55E+1	3.14E+0
PET	MJ	1.74E+1	4.00E-1	1.44E+0	1.92E+1	1.66E-1	1.71E+0	9.79E-3	-1.87E+1	2.43E+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	1.54E-2	4.54E-5	4.60E-3	2.00E-2	1.75E-5	1.06E-3	1.09E-5	-7.16E-3	1.40E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	8.35E-6	9.45E-7	4.04E-7	9.69E-6	3.94E-7	3.32E-6	1.08E-8	-3.57E-6	9.85E-6
NHWD	kg	6.93E-2	2.36E-2	1.65E-3	9.45E-2	9.56E-3	7.18E-2	3.92E-2	-1.81E-2	1.97E-1
RWD	kg	3.27E-5	2.45E-6	5.79E-7	3.57E-5	1.05E-6	6.73E-6	5.80E-8	-1.14E-5	3.22E-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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