

Environmental Profile

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

Ecochain v3.5.64



Product: 3080082 - AS+ Reducer DN 150x100 short
 Unit: 1 piece
 Manufacturer: Wavin Germany Twist
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 49767 Twist
 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	1.18E+0	4.35E-2	5.95E-2	1.28E+0	1.84E-2	6.11E-1	3.78E-3	-7.07E-1	1.21E+0
GWP-f	kg CO2 eq	1.18E+0	4.34E-2	4.85E-2	1.27E+0	1.84E-2	5.79E-1	3.78E-3	-7.73E-1	1.10E+0
GWP-b	kg CO2 eq	-1.87E-3	2.00E-5	7.26E-3	5.41E-3	1.12E-5	3.23E-2	7.39E-6	6.65E-2	1.04E-1
GWP-luluc	kg CO2 eq	1.09E-3	1.59E-5	3.72E-3	4.83E-3	6.50E-6	1.52E-4	1.51E-7	-6.44E-4	4.34E-3
ODP	kg CFC11 eq	9.55E-8	9.59E-9	5.53E-9	1.11E-7	4.23E-9	3.61E-8	2.20E-10	-2.55E-8	1.26E-7
AP	mol H+ eq	5.22E-3	2.52E-4	2.33E-4	5.71E-3	1.05E-4	8.62E-4	5.25E-6	-2.62E-3	4.06E-3
EP-fw	kg P eq	3.26E-5	4.38E-7	7.38E-7	3.38E-5	1.51E-7	7.59E-6	6.89E-9	-1.52E-5	2.63E-5
EP-m	kg N eq	1.00E-3	8.88E-5	6.12E-5	1.15E-3	3.74E-5	2.26E-4	3.20E-6	-4.68E-4	9.48E-4
EP-T	mol N eq	1.12E-2	9.79E-4	6.47E-4	1.29E-2	4.13E-4	2.49E-3	2.14E-5	-5.22E-3	1.06E-2
POCP	kg NMVOC eq	3.84E-3	2.79E-4	1.85E-4	4.30E-3	1.18E-4	7.65E-4	6.85E-6	-2.26E-3	2.93E-3
ADP-mm	kg Sb eq	1.01E-4	1.10E-6	9.98E-7	1.03E-4	4.75E-7	3.02E-6	5.33E-9	-6.73E-6	1.00E-4
ADP-f	MJ	2.50E+1	6.55E-1	6.11E-1	2.63E+1	2.82E-1	2.65E+0	1.61E-2	-2.54E+1	3.86E+0
WDP	m3 depriv.	1.16E+0	2.34E-3	3.63E-1	1.52E+0	8.65E-4	6.02E-2	9.36E-5	-5.55E-1	1.03E+0
PM	disease inc.	4.76E-8	3.90E-9	3.16E-9	5.47E-8	1.66E-9	1.38E-8	1.11E-10	-2.61E-8	4.42E-8
IR	kBq U-235 eq	4.62E-2	2.74E-3	8.16E-4	4.97E-2	1.23E-3	9.38E-3	7.39E-5	-1.63E-2	4.41E-2
ETP-fw	CTUe	2.84E+2	5.84E-1	9.31E-1	2.85E+2	2.29E-1	6.31E+0	1.33E-2	-8.42E+0	2.83E+2
HTP-c	CTUh	4.71E-10	1.89E-11	3.99E-11	5.30E-10	8.15E-12	3.52E-10	3.96E-13	-1.74E-10	7.17E-10
HTP-nc	CTUh	1.34E-7	6.39E-10	9.81E-10	1.36E-7	2.73E-10	4.58E-9	7.99E-12	-5.25E-9	1.35E-7
SQP	Pt	6.16E+0	5.68E-1	5.93E-2	6.79E+0	2.41E-1	1.84E+0	4.13E-2	-1.31E+1	-4.20E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.42E+0	8.20E-3	2.01E+0	3.43E+0	4.04E-3	2.36E-1	5.97E-4	-2.58E+0	1.09E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.42E+0	8.20E-3	2.01E+0	3.43E+0	4.04E-3	2.36E-1	5.97E-4	-2.58E+0	1.09E+0
PENRE	MJ	2.68E+1	6.95E-1	6.66E-1	2.82E+1	2.99E-1	2.82E+0	1.71E-2	-2.73E+1	4.01E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.68E+1	6.95E-1	6.66E-1	2.82E+1	2.99E-1	2.82E+0	1.71E-2	-2.73E+1	4.01E+0
PET	MJ	2.82E+1	7.04E-1	2.67E+0	3.16E+1	3.03E-1	3.06E+0	1.77E-2	-2.99E+1	5.10E+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	2.64E-2	7.98E-5	8.54E-3	3.50E-2	3.19E-5	1.86E-3	1.97E-5	-9.39E-3	2.75E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.27E-5	1.66E-6	7.51E-7	1.51E-5	7.21E-7	5.86E-6	1.95E-8	-4.88E-6	1.68E-5
NHWD	kg	1.05E-1	4.15E-2	3.06E-3	1.50E-1	1.75E-2	1.28E-1	7.09E-2	-2.53E-2	3.41E-1
RWD	kg	5.00E-5	4.30E-6	1.08E-6	5.54E-5	1.92E-6	1.19E-5	1.05E-7	-1.47E-5	5.45E-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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