

Environmental Profile

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

Ecochain v3.5.64



Product: 3053446 - SafeTech RCn PotW Pp 125x11.4 L=12 BC
Unit: 1 piece
Manufacturer: Wavin - DE - Westeregeln - verified
Address: Borrweg 10
39448 Börde-Hakel
Germany
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LCA standard: EN15804+A2 (2019)
Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified: Yes
Issue date: 11-08-2022
End of validity: 11-08-2027
Verifier: Martijn van Hövell - SGS Search



Wavin SafeTech RC n is a co-extruded PE-100 RC two-layer pipe with protective properties according to PAS 1075. The outer signal layer is about 10% of the standard wall thickness and is colored according to the medium - blue for drinking water, orange for gas and green for waste water.

This LCA was evaluated according to EN15804+A2. It was concluded that the LCA complies with this standard.

The LCA background information and project dossier have been registered in the online Ecochain application in the account Wavin - DE - Westeregeln - verified (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	9.88E+1	4.63E+0	1.83E+0	1.05E+2	1.29E+0	4.21E+1	7.17E-1	-6.49E+1	8.44E+1
GWP-f	kg CO2 eq	9.83E+1	4.63E+0	1.53E+0	1.04E+2	1.29E+0	4.21E+1	7.17E-1	-6.47E+1	8.39E+1
GWP-b	kg CO2 eq	4.81E-1	1.95E-3	1.44E-1	6.27E-1	7.86E-4	-4.88E-2	5.38E-4	-2.45E-1	3.34E-1
GWP-luluc	kg CO2 eq	2.98E-2	1.77E-3	1.61E-1	1.93E-1	4.58E-4	7.27E-3	1.03E-5	-1.47E-2	1.86E-1
ODP	kg CFC11 eq	5.09E-6	1.02E-6	2.11E-7	6.32E-6	2.98E-7	9.46E-7	1.53E-8	-3.10E-6	4.48E-6
AP	mol H+ eq	3.68E-1	3.44E-2	8.83E-3	4.11E-1	7.37E-3	3.98E-2	3.65E-4	-1.79E-1	2.79E-1
EP-fw	kg P eq	1.64E-3	4.50E-5	3.41E-5	1.72E-3	1.06E-5	2.10E-4	4.74E-7	-8.06E-4	1.13E-3
EP-m	kg N eq	6.14E-2	1.12E-2	1.91E-3	7.45E-2	2.64E-3	1.16E-2	2.58E-4	-3.27E-2	5.63E-2
EP-T	mol N eq	6.86E-1	1.23E-1	1.90E-2	8.29E-1	2.91E-2	1.27E-1	1.48E-3	-3.64E-1	6.22E-1
POCP	kg NMVOC eq	3.27E-1	3.45E-2	5.47E-3	3.67E-1	8.31E-3	4.03E-2	5.81E-4	-1.70E-1	2.47E-1
ADP-mm	kg Sb eq	9.58E-4	1.12E-4	4.13E-5	1.11E-3	3.35E-5	1.57E-4	3.66E-7	-4.18E-4	8.84E-4
ADP-f	MJ	3.48E+3	6.92E+1	1.82E+1	3.56E+3	1.99E+1	1.26E+2	1.12E+0	-1.94E+3	1.77E+3
WDP	m3 depriv.	7.58E+1	2.39E-1	9.44E+0	8.54E+1	6.09E-2	2.48E+0	5.11E-3	-3.77E+1	5.03E+1
PM	disease inc.	3.44E-6	3.99E-7	8.30E-8	3.92E-6	1.17E-7	6.54E-7	7.67E-9	-1.42E-6	3.29E-6
IR	kBq U-235 eq	2.94E+0	2.90E-1	5.19E-2	3.28E+0	8.68E-2	3.80E-1	5.20E-3	-1.17E+0	2.58E+0
ETP-fw	CTUe	6.33E+2	6.08E+1	4.21E+1	7.36E+2	1.61E+1	1.43E+2	9.84E-1	-2.82E+2	6.15E+2
HTP-c	CTUh	2.61E-8	2.05E-9	1.56E-9	2.97E-8	5.74E-10	1.70E-8	2.71E-11	-1.34E-8	3.39E-8
HTP-nc	CTUh	6.19E-7	6.58E-8	3.94E-8	7.25E-7	1.92E-8	2.15E-7	6.26E-10	-3.00E-7	6.59E-7
SQP	Pt	1.33E+2	5.74E+1	1.87E+0	1.92E+2	1.70E+1	1.01E+2	2.87E+0	-6.16E+1	2.51E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.67E+1	8.44E-1	8.69E+1	1.44E+2	2.85E-1	6.22E+0	4.42E-2	-2.81E+1	1.23E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.67E+1	8.44E-1	8.69E+1	1.44E+2	2.85E-1	6.22E+0	4.42E-2	-2.81E+1	1.23E+2
PENRE	MJ	3.73E+3	7.35E+1	1.94E+1	3.82E+3	2.11E+1	1.34E+2	1.18E+0	-2.09E+3	1.89E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.73E+3	7.35E+1	1.94E+1	3.82E+3	2.11E+1	1.34E+2	1.18E+0	-2.09E+3	1.89E+3
PET	MJ	3.79E+3	7.43E+1	1.06E+2	3.97E+3	2.14E+1	1.41E+2	1.23E+0	-2.12E+3	2.01E+3
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	1.15E+0	8.17E-3	2.24E-1	1.38E+0	2.25E-3	7.29E-2	1.38E-3	-5.76E-1	8.84E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.70E-4	1.69E-4	3.17E-5	6.71E-4	5.08E-5	2.05E-4	1.34E-6	-5.70E-4	3.59E-4
NHWD	kg	3.25E+0	4.17E+0	3.93E-2	7.46E+0	1.23E+0	6.19E+0	4.92E+0	-1.58E+0	1.82E+1
RWD	kg	3.15E-3	4.56E-4	7.58E-5	3.68E-3	1.35E-4	4.81E-4	7.30E-6	-1.09E-3	3.22E-3
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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