

Environmental Profile

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

Ecochain v3.5.64



Product: 3073830 - SafeTech RCn PotW Pp 110x10 L=6 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	3.84E+1	1.80E+0	7.03E-1	4.09E+1	5.03E-1	1.64E+1	2.78E-1	-2.52E+1	3.28E+1
GWP-f	kg CO2 eq	3.82E+1	1.80E+0	5.86E-1	4.06E+1	5.02E-1	1.64E+1	2.78E-1	-2.51E+1	3.26E+1
GWP-b	kg CO2 eq	1.87E-1	7.56E-4	5.51E-2	2.42E-1	3.05E-4	-1.89E-2	2.09E-4	-9.52E-2	1.29E-1
GWP-luluc	kg CO2 eq	1.16E-2	6.87E-4	6.16E-2	7.38E-2	1.78E-4	2.82E-3	3.99E-6	-5.71E-3	7.11E-2
ODP	kg CFC11 eq	1.98E-6	3.95E-7	8.13E-8	2.45E-6	1.16E-7	3.67E-7	5.94E-9	-1.20E-6	1.74E-6
AP	mol H+ eq	1.43E-1	1.33E-2	3.39E-3	1.60E-1	2.86E-3	1.54E-2	1.42E-4	-6.95E-2	1.08E-1
EP-fw	kg P eq	6.36E-4	1.75E-5	1.31E-5	6.67E-4	4.13E-6	8.14E-5	1.84E-7	-3.13E-4	4.40E-4
EP-m	kg N eq	2.39E-2	4.34E-3	7.35E-4	2.89E-2	1.02E-3	4.49E-3	1.00E-4	-1.27E-2	2.18E-2
EP-T	mol N eq	2.67E-1	4.79E-2	7.30E-3	3.22E-1	1.13E-2	4.94E-2	5.75E-4	-1.41E-1	2.42E-1
POCP	kg NMVOC eq	1.27E-1	1.34E-2	2.10E-3	1.43E-1	3.23E-3	1.56E-2	2.25E-4	-6.59E-2	9.58E-2
ADP-mm	kg Sb eq	3.72E-4	4.35E-5	1.58E-5	4.31E-4	1.30E-5	6.11E-5	1.42E-7	-1.62E-4	3.43E-4
ADP-f	MJ	1.35E+3	2.69E+1	6.99E+0	1.38E+3	7.71E+0	4.90E+1	4.34E-1	-7.53E+2	6.88E+2
WDP	m3 depriv.	2.94E+1	9.30E-2	3.61E+0	3.31E+1	2.37E-2	9.62E-1	1.99E-3	-1.46E+1	1.95E+1
PM	disease inc.	1.34E-6	1.55E-7	3.19E-8	1.52E-6	4.53E-8	2.54E-7	2.98E-9	-5.50E-7	1.28E-6
IR	kBq U-235 eq	1.14E+0	1.13E-1	2.00E-2	1.27E+0	3.37E-2	1.47E-1	2.02E-3	-4.55E-1	1.00E+0
ETP-fw	CTUe	2.46E+2	2.36E+1	1.61E+1	2.86E+2	6.26E+0	5.56E+1	3.82E-1	-1.09E+2	2.38E+2
HTP-c	CTUh	1.02E-8	7.94E-10	5.97E-10	1.15E-8	2.23E-10	6.59E-9	1.05E-11	-5.20E-9	1.32E-8
HTP-nc	CTUh	2.41E-7	2.55E-8	1.51E-8	2.81E-7	7.46E-9	8.33E-8	2.43E-10	-1.16E-7	2.56E-7
SQP	Pt	5.16E+1	2.23E+1	7.22E-1	7.46E+1	6.60E+0	3.91E+1	1.11E+0	-2.39E+1	9.75E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.20E+1	3.28E-1	3.32E+1	5.55E+1	1.11E-1	2.42E+0	1.72E-2	-1.09E+1	4.72E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.20E+1	3.28E-1	3.32E+1	5.55E+1	1.11E-1	2.42E+0	1.72E-2	-1.09E+1	4.72E+1
PENRE	MJ	1.45E+3	2.85E+1	7.47E+0	1.48E+3	8.19E+0	5.22E+1	4.60E-1	-8.13E+2	7.33E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.45E+3	2.85E+1	7.47E+0	1.48E+3	8.19E+0	5.22E+1	4.60E-1	-8.13E+2	7.33E+2
PET	MJ	1.47E+3	2.89E+1	4.07E+1	1.54E+3	8.30E+0	5.46E+1	4.77E-1	-8.24E+2	7.80E+2
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	4.47E-1	3.17E-3	8.57E-2	5.36E-1	8.73E-4	2.83E-2	5.36E-4	-2.24E-1	3.42E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.83E-4	6.58E-5	1.22E-5	2.61E-4	1.97E-5	7.97E-5	5.20E-7	-2.21E-4	1.39E-4
NHWD	kg	1.26E+0	1.62E+0	1.52E-2	2.90E+0	4.78E-1	2.41E+0	1.91E+0	-6.14E-1	7.08E+0
RWD	kg	1.22E-3	1.77E-4	2.93E-5	1.43E-3	5.24E-5	1.87E-4	2.84E-6	-4.22E-4	1.25E-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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