

Environmental Profile

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

Ecochain v3.5.64



Product: 3072752 - SafeTech RCn PotW Pp 180x16.4 L=100 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	1.71E+3	8.02E+1	3.37E+1	1.82E+3	2.24E+1	7.29E+2	1.24E+1	-1.12E+3	1.46E+3
GWP-f	kg CO2 eq	1.70E+3	8.02E+1	2.78E+1	1.81E+3	2.24E+1	7.29E+2	1.24E+1	-1.12E+3	1.45E+3
GWP-b	kg CO2 eq	8.38E+0	3.37E-2	2.78E+0	1.12E+1	1.36E-2	-8.96E-1	9.32E-3	-4.25E+0	6.07E+0
GWP-luluc	kg CO2 eq	5.16E-1	3.06E-2	3.13E+0	3.67E+0	7.93E-3	1.26E-1	1.78E-4	-2.55E-1	3.55E+0
ODP	kg CFC11 eq	8.82E-5	1.76E-5	3.72E-6	1.10E-4	5.16E-6	1.64E-5	2.65E-7	-5.37E-5	7.76E-5
AP	mol H+ eq	6.36E+0	5.95E-1	1.64E-1	7.12E+0	1.28E-1	6.88E-1	6.32E-3	-3.10E+0	4.85E+0
EP-fw	kg P eq	2.83E-2	7.79E-4	6.28E-4	2.97E-2	1.84E-4	3.63E-3	8.20E-6	-1.39E-2	1.96E-2
EP-m	kg N eq	1.06E+0	1.93E-1	3.42E-2	1.29E+0	4.57E-2	2.00E-1	4.47E-3	-5.67E-1	9.74E-1
EP-T	mol N eq	1.19E+1	2.14E+0	3.43E-1	1.44E+1	5.03E-1	2.20E+0	2.56E-2	-6.31E+0	1.08E+1
POCP	kg NMVOC eq	5.67E+0	5.98E-1	9.89E-2	6.36E+0	1.44E-1	6.97E-1	1.01E-2	-2.94E+0	4.27E+0
ADP-mm	kg Sb eq	1.66E-2	1.94E-3	7.97E-4	1.93E-2	5.80E-4	2.72E-3	6.34E-6	-7.24E-3	1.54E-2
ADP-f	MJ	6.02E+4	1.20E+3	3.29E+2	6.17E+4	3.44E+2	2.18E+3	1.93E+1	-3.36E+4	3.07E+4
WDP	m3 depriv.	1.31E+3	4.15E+0	1.82E+2	1.50E+3	1.06E+0	4.29E+1	8.86E-2	-6.53E+2	8.88E+2
PM	disease inc.	5.96E-5	6.91E-6	1.49E-6	6.80E-5	2.02E-6	1.13E-5	1.33E-7	-2.45E-5	5.69E-5
IR	kBq U-235 eq	5.08E+1	5.03E+0	9.03E-1	5.67E+1	1.50E+0	6.58E+0	9.01E-2	-2.03E+1	4.46E+1
ETP-fw	CTUe	1.10E+4	1.05E+3	7.91E+2	1.28E+4	2.79E+2	2.48E+3	1.70E+1	-4.88E+3	1.07E+4
HTP-c	CTUh	4.52E-7	3.54E-8	2.94E-8	5.17E-7	9.94E-9	2.94E-7	4.69E-10	-2.32E-7	5.89E-7
HTP-nc	CTUh	1.07E-5	1.14E-6	7.51E-7	1.26E-5	3.33E-7	3.72E-6	1.08E-8	-5.19E-6	1.15E-5
SQP	Pt	2.29E+3	9.94E+2	3.24E+1	3.32E+3	2.94E+2	1.74E+3	4.96E+1	-1.07E+3	4.34E+3
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	9.80E+2	1.46E+1	1.68E+3	2.68E+3	4.93E+0	1.08E+2	7.65E-1	-4.86E+2	2.31E+3
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	9.80E+2	1.46E+1	1.68E+3	2.68E+3	4.93E+0	1.08E+2	7.65E-1	-4.86E+2	2.31E+3
PENRE	MJ	6.46E+4	1.27E+3	3.51E+2	6.62E+4	3.65E+2	2.33E+3	2.05E+1	-3.62E+4	3.27E+4
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.46E+4	1.27E+3	3.51E+2	6.62E+4	3.65E+2	2.33E+3	2.05E+1	-3.62E+4	3.27E+4
PET	MJ	6.56E+4	1.29E+3	2.04E+3	6.89E+4	3.70E+2	2.43E+3	2.13E+1	-3.67E+4	3.50E+4
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	1.99E+1	1.41E-1	4.32E+0	2.44E+1	3.89E-2	1.26E+0	2.39E-2	-9.97E+0	1.57E+1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	8.14E-3	2.93E-3	5.46E-4	1.16E-2	8.79E-4	3.55E-3	2.32E-5	-9.87E-3	6.21E-3
NHWD	kg	5.62E+1	7.22E+1	6.83E-1	1.29E+2	2.13E+1	1.07E+2	8.52E+1	-2.74E+1	3.15E+2
RWD	kg	5.45E-2	7.89E-3	1.31E-3	6.37E-2	2.34E-3	8.33E-3	1.26E-4	-1.88E-2	5.57E-2
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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