

Environmental Profile

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

Ecochain v3.5.64



Product: 3074320 - SafeTech RCn PotW Pp 180x10.7 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	6.96E+1	3.26E+0	1.32E+0	7.42E+1	9.12E-1	2.97E+1	5.05E-1	-4.57E+1	5.95E+1
GWP-f	kg CO2 eq	6.93E+1	3.26E+0	1.09E+0	7.36E+1	9.11E-1	2.97E+1	5.05E-1	-4.56E+1	5.92E+1
GWP-b	kg CO2 eq	3.38E-1	1.37E-3	1.06E-1	4.45E-1	5.53E-4	-3.31E-2	3.79E-4	-1.73E-1	2.40E-1
GWP-luluc	kg CO2 eq	2.10E-2	1.25E-3	1.18E-1	1.41E-1	3.23E-4	5.12E-3	7.24E-6	-1.04E-2	1.36E-1
ODP	kg CFC11 eq	3.59E-6	7.16E-7	1.49E-7	4.45E-6	2.10E-7	6.66E-7	1.08E-8	-2.19E-6	3.16E-6
AP	mol H+ eq	2.59E-1	2.42E-2	6.36E-3	2.90E-1	5.19E-3	2.80E-2	2.57E-4	-1.26E-1	1.97E-1
EP-fw	kg P eq	1.15E-3	3.17E-5	2.45E-5	1.21E-3	7.50E-6	1.48E-4	3.34E-7	-5.68E-4	7.98E-4
EP-m	kg N eq	4.33E-2	7.87E-3	1.36E-3	5.25E-2	1.86E-3	8.15E-3	1.82E-4	-2.31E-2	3.97E-2
EP-T	mol N eq	4.84E-1	8.69E-2	1.36E-2	5.84E-1	2.05E-2	8.97E-2	1.04E-3	-2.57E-1	4.39E-1
POCP	kg NMVOC eq	2.31E-1	2.43E-2	3.90E-3	2.59E-1	5.85E-3	2.84E-2	4.09E-4	-1.20E-1	1.74E-1
ADP-mm	kg Sb eq	6.75E-4	7.90E-5	3.03E-5	7.84E-4	2.36E-5	1.11E-4	2.58E-7	-2.94E-4	6.24E-4
ADP-f	MJ	2.45E+3	4.87E+1	1.30E+1	2.51E+3	1.40E+1	8.88E+1	7.87E-1	-1.37E+3	1.25E+3
WDP	m3 depriv.	5.34E+1	1.69E-1	6.91E+0	6.05E+1	4.29E-2	1.75E+0	3.60E-3	-2.65E+1	3.57E+1
PM	disease inc.	2.43E-6	2.81E-7	5.91E-8	2.77E-6	8.23E-8	4.61E-7	5.40E-9	-9.98E-7	2.32E-6
IR	kBq U-235 eq	2.07E+0	2.05E-1	3.65E-2	2.31E+0	6.11E-2	2.68E-1	3.67E-3	-8.25E-1	1.82E+0
ETP-fw	CTUe	4.46E+2	4.28E+1	3.05E+1	5.20E+2	1.14E+1	1.01E+2	6.93E-1	-1.99E+2	4.34E+2
HTP-c	CTUh	1.84E-8	1.44E-9	1.13E-9	2.10E-8	4.04E-10	1.20E-8	1.91E-11	-9.44E-9	2.39E-8
HTP-nc	CTUh	4.36E-7	4.63E-8	2.87E-8	5.12E-7	1.35E-8	1.51E-7	4.41E-10	-2.11E-7	4.66E-7
SQP	Pt	9.36E+1	4.04E+1	1.31E+0	1.35E+2	1.20E+1	7.09E+1	2.02E+0	-4.34E+1	1.77E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.99E+1	5.95E-1	6.38E+1	1.04E+2	2.01E-1	4.38E+0	3.11E-2	-1.98E+1	8.92E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.99E+1	5.95E-1	6.38E+1	1.04E+2	2.01E-1	4.38E+0	3.11E-2	-1.98E+1	8.92E+1
PENRE	MJ	2.63E+3	5.18E+1	1.39E+1	2.69E+3	1.49E+1	9.46E+1	8.35E-1	-1.47E+3	1.33E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.63E+3	5.18E+1	1.39E+1	2.69E+3	1.49E+1	9.46E+1	8.35E-1	-1.47E+3	1.33E+3
PET	MJ	2.67E+3	5.23E+1	7.77E+1	2.80E+3	1.51E+1	9.90E+1	8.66E-1	-1.49E+3	1.42E+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	8.11E-1	5.75E-3	1.64E-1	9.81E-1	1.58E-3	5.13E-2	9.72E-4	-4.06E-1	6.29E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.31E-4	1.19E-4	2.22E-5	4.73E-4	3.58E-5	1.45E-4	9.44E-7	-4.02E-4	2.53E-4
NHWD	kg	2.29E+0	2.94E+0	2.76E-2	5.25E+0	8.67E-1	4.36E+0	3.47E+0	-1.11E+0	1.28E+1
RWD	kg	2.22E-3	3.21E-4	5.31E-5	2.59E-3	9.51E-5	3.39E-4	5.14E-6	-7.66E-4	2.27E-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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