

Environmental Profile

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

Ecochain v3.5.64



Product: 3070757 - SafeTech RCn PotW Pp 500x45.4 L=12
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	1.57E+3	7.38E+1	3.41E+1	1.68E+3	2.06E+1	6.70E+2	1.14E+1	-1.03E+3	1.35E+3
GWP-f	kg CO2 eq	1.56E+3	7.37E+1	2.78E+1	1.67E+3	2.06E+1	6.71E+2	1.14E+1	-1.03E+3	1.34E+3
GWP-b	kg CO2 eq	7.67E+0	3.10E-2	2.98E+0	1.07E+1	1.25E-2	-8.00E-1	8.57E-3	-3.90E+0	6.00E+0
GWP-luluc	kg CO2 eq	4.75E-1	2.81E-2	3.36E+0	3.86E+0	7.29E-3	1.16E-1	1.64E-4	-2.34E-1	3.75E+0
ODP	kg CFC11 eq	8.11E-5	1.62E-5	3.55E-6	1.01E-4	4.75E-6	1.51E-5	2.43E-7	-4.94E-5	7.15E-5
AP	mol H+ eq	5.85E+0	5.47E-1	1.66E-1	6.57E+0	1.17E-1	6.33E-1	5.81E-3	-2.85E+0	4.47E+0
EP-fw	kg P eq	2.61E-2	7.16E-4	6.35E-4	2.74E-2	1.69E-4	3.34E-3	7.54E-6	-1.28E-2	1.81E-2
EP-m	kg N eq	9.78E-1	1.78E-1	3.34E-2	1.19E+0	4.20E-2	1.84E-1	4.11E-3	-5.21E-1	8.98E-1
EP-T	mol N eq	1.09E+1	1.96E+0	3.38E-1	1.32E+1	4.63E-1	2.03E+0	2.36E-2	-5.80E+0	9.94E+0
POCP	kg NMVOC eq	5.21E+0	5.50E-1	9.74E-2	5.86E+0	1.32E-1	6.41E-1	9.24E-3	-2.70E+0	3.94E+0
ADP-mm	kg Sb eq	1.52E-2	1.79E-3	8.52E-4	1.79E-2	5.33E-4	2.50E-3	5.83E-6	-6.65E-3	1.43E-2
ADP-f	MJ	5.54E+4	1.10E+3	3.24E+2	5.68E+4	3.16E+2	2.01E+3	1.78E+1	-3.09E+4	2.82E+4
WDP	m3 depriv.	1.21E+3	3.81E+0	1.94E+2	1.40E+3	9.70E-1	3.94E+1	8.14E-2	-6.00E+2	8.44E+2
PM	disease inc.	5.48E-5	6.36E-6	1.45E-6	6.26E-5	1.86E-6	1.04E-5	1.22E-7	-2.25E-5	5.24E-5
IR	kBq U-235 eq	4.67E+1	4.62E+0	8.44E-1	5.22E+1	1.38E+0	6.05E+0	8.28E-2	-1.86E+1	4.11E+1
ETP-fw	CTUe	1.01E+4	9.67E+2	8.19E+2	1.19E+4	2.57E+2	2.28E+3	1.57E+1	-4.49E+3	9.94E+3
HTP-c	CTUh	4.16E-7	3.26E-8	3.05E-8	4.79E-7	9.14E-9	2.70E-7	4.32E-10	-2.13E-7	5.46E-7
HTP-nc	CTUh	9.86E-6	1.05E-6	7.92E-7	1.17E-5	3.06E-7	3.42E-6	9.96E-9	-4.77E-6	1.07E-5
SQP	Pt	2.11E+3	9.14E+2	3.00E+1	3.06E+3	2.70E+2	1.60E+3	4.56E+1	-9.80E+2	4.00E+3
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	9.02E+2	1.34E+1	1.81E+3	2.73E+3	4.54E+0	9.90E+1	7.03E-1	-4.47E+2	2.38E+3
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	9.02E+2	1.34E+1	1.81E+3	2.73E+3	4.54E+0	9.90E+1	7.03E-1	-4.47E+2	2.38E+3
PENRE	MJ	5.94E+4	1.17E+3	3.46E+2	6.09E+4	3.36E+2	2.14E+3	1.89E+1	-3.33E+4	3.01E+4
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.94E+4	1.17E+3	3.46E+2	6.09E+4	3.36E+2	2.14E+3	1.89E+1	-3.33E+4	3.01E+4
PET	MJ	6.03E+4	1.18E+3	2.16E+3	6.36E+4	3.40E+2	2.24E+3	1.96E+1	-3.38E+4	3.25E+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	1.83E+1	1.30E-1	4.60E+0	2.30E+1	3.58E-2	1.16E+0	2.20E-2	-9.17E+0	1.51E+1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	7.49E-3	2.70E-3	5.02E-4	1.07E-2	8.08E-4	3.27E-3	2.13E-5	-9.08E-3	5.71E-3
NHWD	kg	5.17E+1	6.64E+1	6.36E-1	1.19E+2	1.96E+1	9.86E+1	7.83E+1	-2.52E+1	2.90E+2
RWD	kg	5.01E-2	7.26E-3	1.20E-3	5.86E-2	2.15E-3	7.66E-3	1.16E-4	-1.73E-2	5.12E-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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