

Environmental Profile

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

Ecochain v3.5.64



Product: 3053716 - SafeTech RCn PotW Pp 110x6.6 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]

Statement of Confidentiality

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	4.40E+2	2.06E+1	8.10E+0	4.69E+2	5.77E+0	1.88E+2	3.19E+0	-2.89E+2	3.76E+2
GWP-f	kg CO2 eq	4.38E+2	2.06E+1	6.75E+0	4.65E+2	5.76E+0	1.88E+2	3.20E+0	-2.88E+2	3.74E+2
GWP-b	kg CO2 eq	2.15E+0	8.67E-3	6.37E-1	2.80E+0	3.50E-3	-2.31E-1	2.40E-3	-1.09E+0	1.48E+0
GWP-luluc	kg CO2 eq	1.33E-1	7.88E-3	7.12E-1	8.53E-1	2.04E-3	3.24E-2	4.58E-5	-6.56E-2	8.22E-1
ODP	kg CFC11 eq	2.27E-5	4.53E-6	9.34E-7	2.82E-5	1.33E-6	4.21E-6	6.81E-8	-1.38E-5	2.00E-5
AP	mol H+ eq	1.64E+0	1.53E-1	3.90E-2	1.83E+0	3.28E-2	1.77E-1	1.63E-3	-7.98E-1	1.24E+0
EP-fw	kg P eq	7.29E-3	2.00E-4	1.51E-4	7.64E-3	4.74E-5	9.34E-4	2.11E-6	-3.59E-3	5.04E-3
EP-m	kg N eq	2.74E-1	4.98E-2	8.45E-3	3.32E-1	1.17E-2	5.15E-2	1.15E-3	-1.46E-1	2.50E-1
EP-T	mol N eq	3.06E+0	5.50E-1	8.41E-2	3.69E+0	1.29E-1	5.67E-1	6.60E-3	-1.62E+0	2.77E+0
POCP	kg NMVOC eq	1.46E+0	1.54E-1	2.42E-2	1.64E+0	3.70E-2	1.79E-1	2.59E-3	-7.57E-1	1.10E+0
ADP-mm	kg Sb eq	4.27E-3	5.00E-4	1.82E-4	4.95E-3	1.49E-4	7.01E-4	1.63E-6	-1.86E-3	3.94E-3
ADP-f	MJ	1.55E+4	3.08E+2	8.05E+1	1.59E+4	8.85E+1	5.62E+2	4.98E+0	-8.64E+3	7.89E+3
WDP	m3 depriv.	3.37E+2	1.07E+0	4.17E+1	3.80E+2	2.72E-1	1.10E+1	2.28E-2	-1.68E+2	2.24E+2
PM	disease inc.	1.53E-5	1.78E-6	3.67E-7	1.75E-5	5.20E-7	2.92E-6	3.42E-8	-6.31E-6	1.46E-5
IR	kBq U-235 eq	1.31E+1	1.29E+0	2.30E-1	1.46E+1	3.87E-1	1.69E+0	2.32E-2	-5.22E+0	1.15E+1
ETP-fw	CTUe	2.82E+3	2.71E+2	1.86E+2	3.28E+3	7.19E+1	6.37E+2	4.39E+0	-1.26E+3	2.74E+3
HTP-c	CTUh	1.16E-7	9.11E-9	6.89E-9	1.32E-7	2.56E-9	7.56E-8	1.21E-10	-5.97E-8	1.51E-7
HTP-nc	CTUh	2.76E-6	2.93E-7	1.74E-7	3.23E-6	8.57E-8	9.56E-7	2.79E-9	-1.34E-6	2.94E-6
SQP	Pt	5.90E+2	2.56E+2	8.29E+0	8.54E+2	7.57E+1	4.49E+2	1.28E+1	-2.74E+2	1.12E+3
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.52E+2	3.76E+0	3.84E+2	6.40E+2	1.27E+0	2.77E+1	1.97E-1	-1.25E+2	5.44E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.52E+2	3.76E+0	3.84E+2	6.40E+2	1.27E+0	2.77E+1	1.97E-1	-1.25E+2	5.44E+2
PENRE	MJ	1.66E+4	3.27E+2	8.60E+1	1.70E+4	9.39E+1	5.98E+2	5.28E+0	-9.32E+3	8.40E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.66E+4	3.27E+2	8.60E+1	1.70E+4	9.39E+1	5.98E+2	5.28E+0	-9.32E+3	8.40E+3
PET	MJ	1.69E+4	3.31E+2	4.70E+2	1.77E+4	9.52E+1	6.26E+2	5.48E+0	-9.45E+3	8.95E+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	5.12E+0	3.64E-2	9.91E-1	6.15E+0	1.00E-2	3.25E-1	6.15E-3	-2.57E+0	3.93E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.09E-3	7.55E-4	1.41E-4	2.99E-3	2.26E-4	9.15E-4	5.97E-6	-2.54E-3	1.60E-3
NHWD	kg	1.45E+1	1.86E+1	1.74E-1	3.32E+1	5.48E+0	2.76E+1	2.19E+1	-7.04E+0	8.12E+1
RWD	kg	1.40E-2	2.03E-3	3.36E-4	1.64E-2	6.02E-4	2.14E-3	3.25E-5	-4.84E-3	1.43E-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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