

Environmental Profile

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

Ecochain v3.5.64



Product: 3053715 - SafeTech RCn PotW Pp 90x8.2 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	4.30E+2	2.02E+1	7.86E+0	4.58E+2	5.64E+0	1.83E+2	3.12E+0	-2.83E+2	3.67E+2
GWP-f	kg CO2 eq	4.28E+2	2.02E+1	6.56E+0	4.55E+2	5.63E+0	1.83E+2	3.12E+0	-2.82E+2	3.65E+2
GWP-b	kg CO2 eq	2.11E+0	8.47E-3	6.15E-1	2.73E+0	3.42E-3	-2.25E-1	2.34E-3	-1.07E+0	1.44E+0
GWP-luluc	kg CO2 eq	1.30E-1	7.70E-3	6.87E-1	8.25E-1	1.99E-3	3.16E-2	4.48E-5	-6.41E-2	7.95E-1
ODP	kg CFC11 eq	2.22E-5	4.43E-6	9.11E-7	2.75E-5	1.30E-6	4.12E-6	6.66E-8	-1.35E-5	1.95E-5
AP	mol H+ eq	1.60E+0	1.50E-1	3.79E-2	1.79E+0	3.21E-2	1.73E-1	1.59E-3	-7.80E-1	1.22E+0
EP-fw	kg P eq	7.12E-3	1.96E-4	1.46E-4	7.47E-3	4.64E-5	9.13E-4	2.06E-6	-3.51E-3	4.92E-3
EP-m	kg N eq	2.67E-1	4.86E-2	8.23E-3	3.24E-1	1.15E-2	5.04E-2	1.12E-3	-1.43E-1	2.45E-1
EP-T	mol N eq	2.99E+0	5.37E-1	8.18E-2	3.61E+0	1.27E-1	5.54E-1	6.45E-3	-1.59E+0	2.71E+0
POCP	kg NMVOC eq	1.42E+0	1.50E-1	2.35E-2	1.60E+0	3.62E-2	1.75E-1	2.53E-3	-7.39E-1	1.07E+0
ADP-mm	kg Sb eq	4.17E-3	4.88E-4	1.76E-4	4.83E-3	1.46E-4	6.85E-4	1.59E-6	-1.82E-3	3.85E-3
ADP-f	MJ	1.51E+4	3.01E+2	7.83E+1	1.55E+4	8.65E+1	5.49E+2	4.86E+0	-8.45E+3	7.71E+3
WDP	m3 depriv.	3.30E+2	1.04E+0	4.03E+1	3.71E+2	2.65E-1	1.08E+1	2.23E-2	-1.64E+2	2.18E+2
PM	disease inc.	1.50E-5	1.74E-6	3.58E-7	1.71E-5	5.08E-7	2.85E-6	3.34E-8	-6.17E-6	1.43E-5
IR	kBq U-235 eq	1.28E+1	1.26E+0	2.24E-1	1.43E+1	3.78E-1	1.65E+0	2.27E-2	-5.10E+0	1.12E+1
ETP-fw	CTUe	2.76E+3	2.65E+2	1.80E+2	3.20E+3	7.02E+1	6.23E+2	4.29E+0	-1.23E+3	2.67E+3
HTP-c	CTUh	1.14E-7	8.90E-9	6.67E-9	1.29E-7	2.50E-9	7.39E-8	1.18E-10	-5.83E-8	1.47E-7
HTP-nc	CTUh	2.70E-6	2.86E-7	1.68E-7	3.15E-6	8.37E-8	9.34E-7	2.72E-9	-1.31E-6	2.87E-6
SQP	Pt	5.77E+2	2.50E+2	8.10E+0	8.35E+2	7.40E+1	4.38E+2	1.25E+1	-2.68E+2	1.09E+3
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.47E+2	3.68E+0	3.70E+2	6.21E+2	1.24E+0	2.71E+1	1.92E-1	-1.22E+2	5.27E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.47E+2	3.68E+0	3.70E+2	6.21E+2	1.24E+0	2.71E+1	1.92E-1	-1.22E+2	5.27E+2
PENRE	MJ	1.62E+4	3.20E+2	8.36E+1	1.66E+4	9.18E+1	5.85E+2	5.16E+0	-9.11E+3	8.21E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.62E+4	3.20E+2	8.36E+1	1.66E+4	9.18E+1	5.85E+2	5.16E+0	-9.11E+3	8.21E+3
PET	MJ	1.65E+4	3.24E+2	4.54E+2	1.73E+4	9.30E+1	6.12E+2	5.35E+0	-9.23E+3	8.74E+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	5.01E+0	3.56E-2	9.57E-1	6.00E+0	9.79E-3	3.17E-1	6.01E-3	-2.51E+0	3.83E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.05E-3	7.38E-4	1.37E-4	2.92E-3	2.21E-4	8.94E-4	5.84E-6	-2.48E-3	1.56E-3
NHWD	kg	1.41E+1	1.82E+1	1.70E-1	3.25E+1	5.36E+0	2.70E+1	2.14E+1	-6.88E+0	7.93E+1
RWD	kg	1.37E-2	1.98E-3	3.28E-4	1.60E-2	5.88E-4	2.09E-3	3.18E-5	-4.73E-3	1.40E-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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