

Environmental Profile

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

Ecochain v3.5.64



Product: 3072754 - SafeTech RCn PotW Pp 200x18.2 L=12 BC
Unit: 1 piece
Manufacturer: Wavin - DE - Westeregeln - verified
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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	2.53E+2	1.19E+1	5.10E+0	2.70E+2	3.32E+0	1.08E+2	1.84E+0	-1.66E+2	2.17E+2
GWP-f	kg CO2 eq	2.52E+2	1.19E+1	4.20E+0	2.68E+2	3.32E+0	1.08E+2	1.84E+0	-1.66E+2	2.15E+2
GWP-b	kg CO2 eq	1.23E+0	4.99E-3	4.26E-1	1.66E+0	2.01E-3	-1.26E-1	1.38E-3	-6.29E-1	9.14E-1
GWP-luluc	kg CO2 eq	7.65E-2	4.53E-3	4.80E-1	5.61E-1	1.17E-3	1.86E-2	2.64E-5	-3.77E-2	5.43E-1
ODP	kg CFC11 eq	1.31E-5	2.61E-6	5.55E-7	1.62E-5	7.64E-7	2.43E-6	3.92E-8	-7.95E-6	1.15E-5
AP	mol H+ eq	9.43E-1	8.81E-2	2.48E-2	1.06E+0	1.89E-2	1.02E-1	9.35E-4	-4.59E-1	7.18E-1
EP-fw	kg P eq	4.20E-3	1.15E-4	9.50E-5	4.41E-3	2.73E-5	5.38E-4	1.21E-6	-2.07E-3	2.91E-3
EP-m	kg N eq	1.57E-1	2.86E-2	5.14E-3	1.91E-1	6.76E-3	2.97E-2	6.62E-4	-8.39E-2	1.44E-1
EP-T	mol N eq	1.76E+0	3.16E-1	5.16E-2	2.13E+0	7.45E-2	3.26E-1	3.80E-3	-9.34E-1	1.60E+0
POCP	kg NMVOC eq	8.39E-1	8.85E-2	1.49E-2	9.42E-1	2.13E-2	1.03E-1	1.49E-3	-4.35E-1	6.33E-1
ADP-mm	kg Sb eq	2.46E-3	2.87E-4	1.22E-4	2.86E-3	8.58E-5	4.03E-4	9.39E-7	-1.07E-3	2.28E-3
ADP-f	MJ	8.91E+3	1.77E+2	4.94E+1	9.14E+3	5.09E+1	3.23E+2	2.86E+0	-4.97E+3	4.55E+3
WDP	m3 depriv.	1.94E+2	6.14E-1	2.78E+1	2.23E+2	1.56E-1	6.35E+0	1.31E-2	-9.66E+1	1.33E+2
PM	disease inc.	8.82E-6	1.02E-6	2.23E-7	1.01E-5	2.99E-7	1.68E-6	1.97E-8	-3.63E-6	8.44E-6
IR	kBq U-235 eq	7.52E+0	7.44E-1	1.34E-1	8.40E+0	2.23E-1	9.74E-1	1.33E-2	-3.00E+0	6.61E+0
ETP-fw	CTUe	1.62E+3	1.56E+2	1.20E+2	1.90E+3	4.13E+1	3.67E+2	2.52E+0	-7.22E+2	1.59E+3
HTP-c	CTUh	6.70E-8	5.24E-9	4.47E-9	7.67E-8	1.47E-9	4.35E-8	6.95E-11	-3.44E-8	8.74E-8
HTP-nc	CTUh	1.59E-6	1.69E-7	1.15E-7	1.87E-6	4.93E-8	5.50E-7	1.60E-9	-7.68E-7	1.70E-6
SQP	Pt	3.40E+2	1.47E+2	4.81E+0	4.92E+2	4.36E+1	2.58E+2	7.35E+0	-1.58E+2	6.43E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.45E+2	2.16E+0	2.59E+2	4.06E+2	7.30E-1	1.59E+1	1.13E-1	-7.20E+1	3.51E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.45E+2	2.16E+0	2.59E+2	4.06E+2	7.30E-1	1.59E+1	1.13E-1	-7.20E+1	3.51E+2
PENRE	MJ	9.56E+3	1.88E+2	5.28E+1	9.80E+3	5.41E+1	3.44E+2	3.04E+0	-5.37E+3	4.84E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	9.56E+3	1.88E+2	5.28E+1	9.80E+3	5.41E+1	3.44E+2	3.04E+0	-5.37E+3	4.84E+3
PET	MJ	9.71E+3	1.91E+2	3.11E+2	1.02E+4	5.48E+1	3.60E+2	3.15E+0	-5.44E+3	5.19E+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	2.95E+0	2.09E-2	6.61E-1	3.63E+0	5.76E-3	1.87E-1	3.54E-3	-1.48E+0	2.35E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.20E-3	4.35E-4	8.09E-5	1.72E-3	1.30E-4	5.26E-4	3.44E-6	-1.46E-3	9.19E-4
NHWD	kg	8.32E+0	1.07E+1	1.01E-1	1.91E+1	3.16E+0	1.59E+1	1.26E+1	-4.05E+0	4.67E+1
RWD	kg	8.07E-3	1.17E-3	1.93E-4	9.43E-3	3.46E-4	1.23E-3	1.87E-5	-2.79E-3	8.24E-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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