

Environmental Profile

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

Ecochain v3.5.64



Product: 3073846 - SafeTech RCn PotW Pp 90x8.2 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	2.58E+1	1.21E+0	4.71E-1	2.75E+1	3.38E-1	1.10E+1	1.87E-1	-1.70E+1	2.21E+1
GWP-f	kg CO2 eq	2.57E+1	1.21E+0	3.93E-1	2.73E+1	3.38E-1	1.10E+1	1.87E-1	-1.69E+1	2.19E+1
GWP-b	kg CO2 eq	1.25E-1	5.09E-4	3.68E-2	1.63E-1	2.05E-4	-1.25E-2	1.41E-4	-6.41E-2	8.65E-2
GWP-luluc	kg CO2 eq	7.80E-3	4.62E-4	4.12E-2	4.94E-2	1.20E-4	1.90E-3	2.69E-6	-3.85E-3	4.76E-2
ODP	kg CFC11 eq	1.33E-6	2.66E-7	5.46E-8	1.65E-6	7.79E-8	2.47E-7	4.00E-9	-8.11E-7	1.17E-6
AP	mol H+ eq	9.62E-2	8.98E-3	2.27E-3	1.07E-1	1.93E-3	1.04E-2	9.53E-5	-4.68E-2	7.30E-2
EP-fw	kg P eq	4.28E-4	1.17E-5	8.76E-6	4.49E-4	2.78E-6	5.48E-5	1.24E-7	-2.11E-4	2.96E-4
EP-m	kg N eq	1.61E-2	2.92E-3	4.93E-4	1.95E-2	6.89E-4	3.02E-3	6.74E-5	-8.56E-3	1.47E-2
EP-T	mol N eq	1.79E-1	3.22E-2	4.90E-3	2.17E-1	7.59E-3	3.33E-2	3.87E-4	-9.52E-2	1.63E-1
POCP	kg NMVOC eq	8.56E-2	9.02E-3	1.41E-3	9.60E-2	2.17E-3	1.05E-2	1.52E-4	-4.44E-2	6.45E-2
ADP-mm	kg Sb eq	2.50E-4	2.93E-5	1.06E-5	2.90E-4	8.75E-6	4.11E-5	9.57E-8	-1.09E-4	2.31E-4
ADP-f	MJ	9.09E+2	1.81E+1	4.69E+0	9.32E+2	5.19E+0	3.29E+1	2.92E-1	-5.07E+2	4.63E+2
WDP	m3 depriv.	1.98E+1	6.26E-2	2.41E+0	2.23E+1	1.59E-2	6.47E-1	1.34E-3	-9.85E+0	1.31E+1
PM	disease inc.	9.00E-7	1.04E-7	2.14E-8	1.03E-6	3.05E-8	1.71E-7	2.00E-9	-3.70E-7	8.59E-7
IR	kBq U-235 eq	7.67E-1	7.59E-2	1.35E-2	8.56E-1	2.27E-2	9.93E-2	1.36E-3	-3.06E-1	6.74E-1
ETP-fw	CTUe	1.66E+2	1.59E+1	1.08E+1	1.92E+2	4.21E+0	3.74E+1	2.57E-1	-7.36E+1	1.60E+2
HTP-c	CTUh	6.83E-9	5.34E-10	4.00E-10	7.77E-9	1.50E-10	4.44E-9	7.09E-12	-3.50E-9	8.86E-9
HTP-nc	CTUh	1.62E-7	1.72E-8	1.01E-8	1.89E-7	5.02E-9	5.61E-8	1.64E-10	-7.83E-8	1.72E-7
SQP	Pt	3.47E+1	1.50E+1	4.86E-1	5.02E+1	4.44E+0	2.63E+1	7.49E-1	-1.61E+1	6.56E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.48E+1	2.21E-1	2.22E+1	3.72E+1	7.44E-2	1.63E+0	1.15E-2	-7.34E+0	3.16E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.48E+1	2.21E-1	2.22E+1	3.72E+1	7.44E-2	1.63E+0	1.15E-2	-7.34E+0	3.16E+1
PENRE	MJ	9.75E+2	1.92E+1	5.01E+0	9.99E+2	5.51E+0	3.51E+1	3.10E-1	-5.47E+2	4.93E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	9.75E+2	1.92E+1	5.01E+0	9.99E+2	5.51E+0	3.51E+1	3.10E-1	-5.47E+2	4.93E+2
PET	MJ	9.90E+2	1.94E+1	2.72E+1	1.04E+3	5.58E+0	3.67E+1	3.21E-1	-5.54E+2	5.25E+2
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	3.01E-1	2.13E-3	5.74E-2	3.60E-1	5.87E-4	1.90E-2	3.61E-4	-1.51E-1	2.30E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.23E-4	4.43E-5	8.24E-6	1.75E-4	1.33E-5	5.36E-5	3.50E-7	-1.49E-4	9.37E-5
NHWD	kg	8.49E-1	1.09E+0	1.02E-2	1.95E+0	3.22E-1	1.62E+0	1.29E+0	-4.13E-1	4.76E+0
RWD	kg	8.23E-4	1.19E-4	1.97E-5	9.62E-4	3.53E-5	1.26E-4	1.91E-6	-2.84E-4	8.40E-4
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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