

Environmental Profile

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

Ecochain v3.5.64



Product: 3015463 - SafeTech RCn PotW Pp 400x23.7 L=12
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	6.82E+2	3.20E+1	1.48E+1	7.29E+2	8.95E+0	2.91E+2	4.95E+0	-4.49E+2	5.85E+2
GWP-f	kg CO2 eq	6.79E+2	3.20E+1	1.21E+1	7.23E+2	8.94E+0	2.91E+2	4.95E+0	-4.47E+2	5.81E+2
GWP-b	kg CO2 eq	3.32E+0	1.34E-2	1.29E+0	4.63E+0	5.43E-3	-3.38E-1	3.72E-3	-1.69E+0	2.61E+0
GWP-luluc	kg CO2 eq	2.06E-1	1.22E-2	1.46E+0	1.68E+0	3.16E-3	5.02E-2	7.11E-5	-1.02E-1	1.63E+0
ODP	kg CFC11 eq	3.52E-5	7.02E-6	1.54E-6	4.38E-5	2.06E-6	6.54E-6	1.06E-7	-2.14E-5	3.10E-5
AP	mol H+ eq	2.54E+0	2.38E-1	7.22E-2	2.85E+0	5.09E-2	2.75E-1	2.52E-3	-1.24E+0	1.94E+0
EP-fw	kg P eq	1.13E-2	3.11E-4	2.76E-4	1.19E-2	7.36E-5	1.45E-3	3.27E-6	-5.57E-3	7.86E-3
EP-m	kg N eq	4.24E-1	7.72E-2	1.45E-2	5.16E-1	1.82E-2	7.99E-2	1.78E-3	-2.26E-1	3.90E-1
EP-T	mol N eq	4.74E+0	8.53E-1	1.47E-1	5.74E+0	2.01E-1	8.80E-1	1.02E-2	-2.52E+0	4.32E+0
POCP	kg NMVOC eq	2.26E+0	2.39E-1	4.23E-2	2.54E+0	5.74E-2	2.78E-1	4.01E-3	-1.17E+0	1.71E+0
ADP-mm	kg Sb eq	6.62E-3	7.75E-4	3.70E-4	7.76E-3	2.31E-4	1.09E-3	2.53E-6	-2.89E-3	6.19E-3
ADP-f	MJ	2.40E+4	4.78E+2	1.41E+2	2.46E+4	1.37E+2	8.71E+2	7.71E+0	-1.34E+4	1.23E+4
WDP	m3 depriv.	5.23E+2	1.65E+0	8.40E+1	6.09E+2	4.21E-1	1.71E+1	3.53E-2	-2.60E+2	3.66E+2
PM	disease inc.	2.38E-5	2.76E-6	6.30E-7	2.72E-5	8.07E-7	4.52E-6	5.30E-8	-9.79E-6	2.28E-5
IR	kBq U-235 eq	2.03E+1	2.01E+0	3.67E-1	2.27E+1	6.00E-1	2.62E+0	3.60E-2	-8.09E+0	1.78E+1
ETP-fw	CTUe	4.38E+3	4.20E+2	3.55E+2	5.15E+3	1.11E+2	9.88E+2	6.80E+0	-1.95E+3	4.31E+3
HTP-c	CTUh	1.81E-7	1.41E-8	1.32E-8	2.08E-7	3.97E-9	1.17E-7	1.87E-10	-9.26E-8	2.37E-7
HTP-nc	CTUh	4.28E-6	4.54E-7	3.44E-7	5.08E-6	1.33E-7	1.48E-6	4.32E-9	-2.07E-6	4.63E-6
SQP	Pt	9.17E+2	3.97E+2	1.30E+1	1.33E+3	1.17E+2	6.96E+2	1.98E+1	-4.25E+2	1.73E+3
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.92E+2	5.83E+0	7.86E+2	1.18E+3	1.97E+0	4.30E+1	3.05E-1	-1.94E+2	1.04E+3
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.92E+2	5.83E+0	7.86E+2	1.18E+3	1.97E+0	4.30E+1	3.05E-1	-1.94E+2	1.04E+3
PENRE	MJ	2.58E+4	5.08E+2	1.50E+2	2.64E+4	1.46E+2	9.28E+2	8.19E+0	-1.45E+4	1.30E+4
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.58E+4	5.08E+2	1.50E+2	2.64E+4	1.46E+2	9.28E+2	8.19E+0	-1.45E+4	1.30E+4
PET	MJ	2.62E+4	5.13E+2	9.37E+2	2.76E+4	1.48E+2	9.71E+2	8.49E+0	-1.47E+4	1.41E+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	7.95E+0	5.64E-2	2.00E+0	1.00E+1	1.55E-2	5.03E-1	9.54E-3	-3.98E+0	6.55E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.25E-3	1.17E-3	2.18E-4	4.64E-3	3.51E-4	1.42E-3	9.26E-6	-3.94E-3	2.48E-3
NHWD	kg	2.24E+1	2.88E+1	2.76E-1	5.15E+1	8.50E+0	4.28E+1	3.40E+1	-1.09E+1	1.26E+2
RWD	kg	2.18E-2	3.15E-3	5.21E-4	2.54E-2	9.33E-4	3.32E-3	5.05E-5	-7.51E-3	2.22E-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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