

Environmental Profile

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

Ecochain v3.5.64



Product: 3015441 - SafeTech RCn PotW Pp 400x36.3 L=12
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	1.01E+3	4.72E+1	2.18E+1	1.07E+3	1.32E+1	4.29E+2	7.30E+0	-6.61E+2	8.63E+2
GWP-f	kg CO2 eq	1.00E+3	4.71E+1	1.78E+1	1.07E+3	1.32E+1	4.29E+2	7.30E+0	-6.58E+2	8.56E+2
GWP-b	kg CO2 eq	4.91E+0	1.98E-2	1.90E+0	6.83E+0	8.00E-3	-5.07E-1	5.48E-3	-2.50E+0	3.84E+0
GWP-luluc	kg CO2 eq	3.04E-1	1.80E-2	2.15E+0	2.47E+0	4.66E-3	7.40E-2	1.05E-4	-1.50E-1	2.40E+0
ODP	kg CFC11 eq	5.19E-5	1.04E-5	2.27E-6	6.45E-5	3.04E-6	9.63E-6	1.56E-7	-3.16E-5	4.57E-5
AP	mol H+ eq	3.74E+0	3.50E-1	1.06E-1	4.20E+0	7.50E-2	4.05E-1	3.71E-3	-1.82E+0	2.86E+0
EP-fw	kg P eq	1.67E-2	4.58E-4	4.06E-4	1.75E-2	1.08E-4	2.13E-3	4.82E-6	-8.20E-3	1.16E-2
EP-m	kg N eq	6.25E-1	1.14E-1	2.13E-2	7.60E-1	2.68E-2	1.18E-1	2.63E-3	-3.33E-1	5.74E-1
EP-T	mol N eq	6.99E+0	1.26E+0	2.16E-1	8.46E+0	2.96E-1	1.30E+0	1.51E-2	-3.71E+0	6.36E+0
POCP	kg NMVOC eq	3.33E+0	3.52E-1	6.23E-2	3.75E+0	8.46E-2	4.10E-1	5.91E-3	-1.73E+0	2.52E+0
ADP-mm	kg Sb eq	9.75E-3	1.14E-3	5.45E-4	1.14E-2	3.41E-4	1.60E-3	3.73E-6	-4.26E-3	9.13E-3
ADP-f	MJ	3.54E+4	7.05E+2	2.07E+2	3.63E+4	2.02E+2	1.28E+3	1.14E+1	-1.97E+4	1.81E+4
WDP	m3 depriv.	7.71E+2	2.44E+0	1.24E+2	8.97E+2	6.21E-1	2.52E+1	5.21E-2	-3.84E+2	5.40E+2
PM	disease inc.	3.50E-5	4.06E-6	9.28E-7	4.00E-5	1.19E-6	6.66E-6	7.81E-8	-1.44E-5	3.35E-5
IR	kBq U-235 eq	2.99E+1	2.96E+0	5.40E-1	3.34E+1	8.84E-1	3.87E+0	5.30E-2	-1.19E+1	2.63E+1
ETP-fw	CTUe	6.45E+3	6.19E+2	5.24E+2	7.59E+3	1.64E+2	1.46E+3	1.00E+1	-2.87E+3	6.35E+3
HTP-c	CTUh	2.66E-7	2.08E-8	1.95E-8	3.06E-7	5.84E-9	1.73E-7	2.76E-10	-1.36E-7	3.49E-7
HTP-nc	CTUh	6.31E-6	6.70E-7	5.07E-7	7.48E-6	1.96E-7	2.18E-6	6.37E-9	-3.05E-6	6.82E-6
SQP	Pt	1.35E+3	5.85E+2	1.92E+1	1.95E+3	1.73E+2	1.03E+3	2.92E+1	-6.27E+2	2.55E+3
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.77E+2	8.59E+0	1.16E+3	1.74E+3	2.90E+0	6.33E+1	4.50E-1	-2.86E+2	1.53E+3
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.77E+2	8.59E+0	1.16E+3	1.74E+3	2.90E+0	6.33E+1	4.50E-1	-2.86E+2	1.53E+3
PENRE	MJ	3.80E+4	7.48E+2	2.22E+2	3.89E+4	2.15E+2	1.37E+3	1.21E+1	-2.13E+4	1.92E+4
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.80E+4	7.48E+2	2.22E+2	3.89E+4	2.15E+2	1.37E+3	1.21E+1	-2.13E+4	1.92E+4
PET	MJ	3.85E+4	7.57E+2	1.38E+3	4.07E+4	2.18E+2	1.43E+3	1.25E+1	-2.16E+4	2.08E+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	1.17E+1	8.31E-2	2.94E+0	1.47E+1	2.29E-2	7.42E-1	1.41E-2	-5.86E+0	9.65E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.78E-3	1.73E-3	3.21E-4	6.83E-3	5.17E-4	2.09E-3	1.36E-5	-5.80E-3	3.65E-3
NHWD	kg	3.30E+1	4.25E+1	4.07E-1	7.59E+1	1.25E+1	6.31E+1	5.01E+1	-1.61E+1	1.86E+2
RWD	kg	3.21E-2	4.64E-3	7.68E-4	3.75E-2	1.38E-3	4.90E-3	7.43E-5	-1.11E-2	3.27E-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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