

Environmental Profile

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

Ecochain v3.5.64



Product: 3084967 - SafeTech RCn PotW Pp 25x3.0 L=200
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					D Reuse- Recovery- Recycling- potential											
A5 Assembly / Construction installation process																

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	8.56E+1	3.59E+0	1.76E+0	9.10E+1	1.12E+0	3.65E+1	6.21E-1	-5.63E+1	7.29E+1
GWP-f	kg CO2 eq	8.52E+1	3.59E+0	1.44E+0	9.02E+1	1.12E+0	3.65E+1	6.22E-1	-5.61E+1	7.25E+1
GWP-b	kg CO2 eq	4.18E-1	1.66E-3	1.49E-1	5.69E-1	6.81E-4	-4.48E-2	4.67E-4	-2.13E-1	3.12E-1
GWP-luluc	kg CO2 eq	2.59E-2	1.32E-3	1.67E-1	1.94E-1	3.97E-4	6.30E-3	8.91E-6	-1.28E-2	1.88E-1
ODP	kg CFC11 eq	4.42E-6	7.92E-7	1.89E-7	5.40E-6	2.58E-7	8.20E-7	1.33E-8	-2.69E-6	3.80E-6
AP	mol H+ eq	3.19E-1	2.08E-2	8.54E-3	3.48E-1	6.39E-3	3.45E-2	3.16E-4	-1.55E-1	2.34E-1
EP-fw	kg P eq	1.42E-3	3.62E-5	3.27E-5	1.49E-3	9.23E-6	1.82E-4	4.11E-7	-6.98E-4	9.81E-4
EP-m	kg N eq	5.32E-2	7.34E-3	1.76E-3	6.23E-2	2.29E-3	1.00E-2	2.24E-4	-2.84E-2	4.65E-2
EP-T	mol N eq	5.95E-1	8.09E-2	1.77E-2	6.94E-1	2.52E-2	1.10E-1	1.28E-3	-3.16E-1	5.15E-1
POCP	kg NMVOC eq	2.84E-1	2.31E-2	5.09E-3	3.12E-1	7.20E-3	3.49E-2	5.03E-4	-1.47E-1	2.07E-1
ADP-mm	kg Sb eq	8.31E-4	9.10E-5	4.25E-5	9.64E-4	2.90E-5	1.36E-4	3.17E-7	-3.62E-4	7.68E-4
ADP-f	MJ	3.01E+3	5.41E+1	1.69E+1	3.09E+3	1.72E+1	1.09E+2	9.68E-1	-1.68E+3	1.53E+3
WDP	m3 depriv.	6.57E+1	1.94E-1	9.68E+0	7.55E+1	5.28E-2	2.15E+0	4.43E-3	-3.27E+1	4.51E+1
PM	disease inc.	2.98E-6	3.22E-7	7.63E-8	3.38E-6	1.01E-7	5.67E-7	6.65E-9	-1.23E-6	2.83E-6
IR	kBq U-235 eq	2.55E+0	2.27E-1	4.55E-2	2.82E+0	7.52E-2	3.29E-1	4.51E-3	-1.01E+0	2.21E+0
ETP-fw	CTUe	5.49E+2	4.83E+1	4.16E+1	6.39E+2	1.40E+1	1.24E+2	8.53E-1	-2.44E+2	5.34E+2
HTP-c	CTUh	2.27E-8	1.57E-9	1.55E-9	2.58E-8	4.97E-10	1.47E-8	2.35E-11	-1.16E-8	2.94E-8
HTP-nc	CTUh	5.37E-7	5.28E-8	3.98E-8	6.30E-7	1.67E-8	1.86E-7	5.42E-10	-2.60E-7	5.73E-7
SQP	Pt	1.15E+2	4.70E+1	1.63E+0	1.64E+2	1.47E+1	8.73E+1	2.48E+0	-5.33E+1	2.15E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.91E+1	6.78E-1	9.01E+1	1.40E+2	2.47E-1	5.39E+0	3.83E-2	-2.43E+1	1.21E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.91E+1	6.78E-1	9.01E+1	1.40E+2	2.47E-1	5.39E+0	3.83E-2	-2.43E+1	1.21E+2
PENRE	MJ	3.23E+3	5.75E+1	1.81E+1	3.31E+3	1.83E+1	1.16E+2	1.03E+0	-1.81E+3	1.63E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.23E+3	5.75E+1	1.81E+1	3.31E+3	1.83E+1	1.16E+2	1.03E+0	-1.81E+3	1.63E+3
PET	MJ	3.28E+3	5.82E+1	1.08E+2	3.45E+3	1.85E+1	1.22E+2	1.07E+0	-1.84E+3	1.75E+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	9.97E-1	6.59E-3	2.30E-1	1.23E+0	1.95E-3	6.31E-2	1.20E-3	-4.99E-1	8.01E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.08E-4	1.37E-4	2.73E-5	5.73E-4	4.40E-5	1.78E-4	1.16E-6	-4.94E-4	3.02E-4
NHWD	kg	2.82E+0	3.43E+0	3.44E-2	6.29E+0	1.07E+0	5.37E+0	4.26E+0	-1.37E+0	1.56E+1
RWD	kg	2.73E-3	3.56E-4	6.54E-5	3.15E-3	1.17E-4	4.17E-4	6.33E-6	-9.42E-4	2.75E-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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