

Environmental Profile

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

Ecochain v3.5.64



Product: 3072751 - SafeTech RCn PotW Pp 180x16.4 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	1.03E+2	4.81E+0	1.99E+0	1.09E+2	1.35E+0	4.37E+1	7.45E-1	-6.74E+1	8.78E+1
GWP-f	kg CO2 eq	1.02E+2	4.81E+0	1.65E+0	1.09E+2	1.34E+0	4.38E+1	7.45E-1	-6.72E+1	8.73E+1
GWP-b	kg CO2 eq	4.99E-1	2.02E-3	1.63E-1	6.64E-1	8.16E-4	-5.05E-2	5.59E-4	-2.55E-1	3.60E-1
GWP-luluc	kg CO2 eq	3.10E-2	1.84E-3	1.83E-1	2.16E-1	4.76E-4	7.55E-3	1.07E-5	-1.53E-2	2.08E-1
ODP	kg CFC11 eq	5.29E-6	1.06E-6	2.22E-7	6.57E-6	3.10E-7	9.83E-7	1.59E-8	-3.22E-6	4.66E-6
AP	mol H+ eq	3.82E-1	3.57E-2	9.65E-3	4.27E-1	7.66E-3	4.13E-2	3.79E-4	-1.86E-1	2.91E-1
EP-fw	kg P eq	1.70E-3	4.67E-5	3.71E-5	1.79E-3	1.11E-5	2.18E-4	4.92E-7	-8.37E-4	1.18E-3
EP-m	kg N eq	6.38E-2	1.16E-2	2.04E-3	7.75E-2	2.74E-3	1.20E-2	2.68E-4	-3.40E-2	5.85E-2
EP-T	mol N eq	7.13E-1	1.28E-1	2.04E-2	8.62E-1	3.02E-2	1.32E-1	1.54E-3	-3.78E-1	6.47E-1
POCP	kg NMVOC eq	3.40E-1	3.59E-2	5.87E-3	3.82E-1	8.63E-3	4.18E-2	6.03E-4	-1.76E-1	2.56E-1
ADP-mm	kg Sb eq	9.95E-4	1.16E-4	4.66E-5	1.16E-3	3.48E-5	1.63E-4	3.80E-7	-4.34E-4	9.22E-4
ADP-f	MJ	3.61E+3	7.19E+1	1.95E+1	3.70E+3	2.06E+1	1.31E+2	1.16E+0	-2.02E+3	1.84E+3
WDP	m3 depriv.	7.87E+1	2.49E-1	1.06E+1	8.96E+1	6.33E-2	2.57E+0	5.31E-3	-3.92E+1	5.31E+1
PM	disease inc.	3.58E-6	4.15E-7	8.85E-8	4.08E-6	1.21E-7	6.80E-7	7.97E-9	-1.47E-6	3.42E-6
IR	kBq U-235 eq	3.05E+0	3.02E-1	5.41E-2	3.41E+0	9.02E-2	3.95E-1	5.41E-3	-1.22E+0	2.68E+0
ETP-fw	CTUe	6.58E+2	6.31E+1	4.65E+1	7.68E+2	1.68E+1	1.49E+2	1.02E+0	-2.93E+2	6.41E+2
HTP-c	CTUh	2.72E-8	2.12E-9	1.73E-9	3.10E-8	5.96E-10	1.76E-8	2.82E-11	-1.39E-8	3.53E-8
HTP-nc	CTUh	6.44E-7	6.83E-8	4.41E-8	7.56E-7	2.00E-8	2.23E-7	6.50E-10	-3.11E-7	6.88E-7
SQP	Pt	1.38E+2	5.97E+1	1.94E+0	2.00E+2	1.77E+1	1.05E+2	2.98E+0	-6.40E+1	2.61E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.89E+1	8.77E-1	9.85E+1	1.58E+2	2.96E-1	6.46E+0	4.59E-2	-2.92E+1	1.36E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.89E+1	8.77E-1	9.85E+1	1.58E+2	2.96E-1	6.46E+0	4.59E-2	-2.92E+1	1.36E+2
PENRE	MJ	3.88E+3	7.63E+1	2.08E+1	3.97E+3	2.19E+1	1.40E+2	1.23E+0	-2.17E+3	1.96E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.88E+3	7.63E+1	2.08E+1	3.97E+3	2.19E+1	1.40E+2	1.23E+0	-2.17E+3	1.96E+3
PET	MJ	3.93E+3	7.72E+1	1.19E+2	4.13E+3	2.22E+1	1.46E+2	1.28E+0	-2.20E+3	2.10E+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	1.20E+0	8.48E-3	2.53E-1	1.46E+0	2.33E-3	7.57E-2	1.43E-3	-5.98E-1	9.38E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.88E-4	1.76E-4	3.28E-5	6.97E-4	5.28E-5	2.13E-4	1.39E-6	-5.92E-4	3.72E-4
NHWD	kg	3.37E+0	4.33E+0	4.09E-2	7.75E+0	1.28E+0	6.44E+0	5.11E+0	-1.64E+0	1.89E+1
RWD	kg	3.27E-3	4.74E-4	7.83E-5	3.82E-3	1.40E-4	5.00E-4	7.59E-6	-1.13E-3	3.34E-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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