

Environmental Profile

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

Ecochain v3.5.64



Product: 3072743 - SafeTech RCn PotW Pp 125x11.4 L=6 BC
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]

Statement of Confidentiality

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	4.97E+1	2.33E+0	9.15E-1	5.29E+1	6.51E-1	2.12E+1	3.61E-1	-3.27E+1	4.25E+1
GWP-f	kg CO2 eq	4.94E+1	2.33E+0	7.63E-1	5.25E+1	6.51E-1	2.12E+1	3.61E-1	-3.25E+1	4.22E+1
GWP-b	kg CO2 eq	2.42E-1	9.79E-4	7.20E-2	3.15E-1	3.95E-4	-2.44E-2	2.71E-4	-1.23E-1	1.68E-1
GWP-luluc	kg CO2 eq	1.50E-2	8.89E-4	8.05E-2	9.64E-2	2.30E-4	3.66E-3	5.17E-6	-7.40E-3	9.29E-2
ODP	kg CFC11 eq	2.56E-6	5.11E-7	1.05E-7	3.18E-6	1.50E-7	4.76E-7	7.69E-9	-1.56E-6	2.25E-6
AP	mol H+ eq	1.85E-1	1.73E-2	4.41E-3	2.07E-1	3.71E-3	2.00E-2	1.84E-4	-9.01E-2	1.41E-1
EP-fw	kg P eq	8.24E-4	2.26E-5	1.70E-5	8.64E-4	5.36E-6	1.05E-4	2.38E-7	-4.05E-4	5.69E-4
EP-m	kg N eq	3.09E-2	5.62E-3	9.55E-4	3.75E-2	1.33E-3	5.82E-3	1.30E-4	-1.65E-2	2.83E-2
EP-T	mol N eq	3.45E-1	6.21E-2	9.50E-3	4.17E-1	1.46E-2	6.40E-2	7.45E-4	-1.83E-1	3.13E-1
POCP	kg NMVOC eq	1.65E-1	1.74E-2	2.73E-3	1.85E-1	4.18E-3	2.02E-2	2.92E-4	-8.54E-2	1.24E-1
ADP-mm	kg Sb eq	4.82E-4	5.64E-5	2.06E-5	5.59E-4	1.68E-5	7.91E-5	1.84E-7	-2.10E-4	4.45E-4
ADP-f	MJ	1.75E+3	3.48E+1	9.09E+0	1.79E+3	9.99E+0	6.34E+1	5.62E-1	-9.76E+2	8.91E+2
WDP	m3 depriv.	3.81E+1	1.20E-1	4.71E+0	4.29E+1	3.07E-2	1.25E+0	2.57E-3	-1.90E+1	2.53E+1
PM	disease inc.	1.73E-6	2.01E-7	4.15E-8	1.97E-6	5.87E-8	3.29E-7	3.86E-9	-7.12E-7	1.65E-6
IR	kBq U-235 eq	1.48E+0	1.46E-1	2.59E-2	1.65E+0	4.37E-2	1.91E-1	2.62E-3	-5.89E-1	1.30E+0
ETP-fw	CTUe	3.19E+2	3.06E+1	2.10E+1	3.70E+2	8.11E+0	7.20E+1	4.95E-1	-1.42E+2	3.09E+2
HTP-c	CTUh	1.32E-8	1.03E-9	7.78E-10	1.50E-8	2.89E-10	8.54E-9	1.36E-11	-6.74E-9	1.71E-8
HTP-nc	CTUh	3.12E-7	3.31E-8	1.97E-8	3.64E-7	9.67E-9	1.08E-7	3.15E-10	-1.51E-7	3.32E-7
SQP	Pt	6.68E+1	2.89E+1	9.36E-1	9.66E+1	8.55E+0	5.07E+1	1.44E+0	-3.10E+1	1.26E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.85E+1	4.25E-1	4.34E+1	7.23E+1	1.43E-1	3.13E+0	2.22E-2	-1.41E+1	6.15E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.85E+1	4.25E-1	4.34E+1	7.23E+1	1.43E-1	3.13E+0	2.22E-2	-1.41E+1	6.15E+1
PENRE	MJ	1.88E+3	3.70E+1	9.71E+0	1.92E+3	1.06E+1	6.76E+1	5.96E-1	-1.05E+3	9.49E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.88E+3	3.70E+1	9.71E+0	1.92E+3	1.06E+1	6.76E+1	5.96E-1	-1.05E+3	9.49E+2
PET	MJ	1.90E+3	3.74E+1	5.31E+1	2.00E+3	1.07E+1	7.07E+1	6.18E-1	-1.07E+3	1.01E+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	5.79E-1	4.11E-3	1.12E-1	6.95E-1	1.13E-3	3.66E-2	6.94E-4	-2.90E-1	4.44E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.37E-4	8.53E-5	1.59E-5	3.38E-4	2.55E-5	1.03E-4	6.74E-7	-2.87E-4	1.80E-4
NHWD	kg	1.63E+0	2.10E+0	1.97E-2	3.75E+0	6.19E-1	3.12E+0	2.48E+0	-7.95E-1	9.17E+0
RWD	kg	1.58E-3	2.29E-4	3.79E-5	1.85E-3	6.79E-5	2.42E-4	3.67E-6	-5.47E-4	1.62E-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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