

Environmental Profile

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

Ecochain v3.5.64



Product: 3072745 - SafeTech RCn PotW Pp 140x8.3 L=12 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	8.44E+1	3.96E+0	1.54E+0	8.99E+1	1.11E+0	3.60E+1	6.13E-1	-5.55E+1	7.21E+1
GWP-f	kg CO2 eq	8.40E+1	3.96E+0	1.28E+0	8.92E+1	1.11E+0	3.60E+1	6.13E-1	-5.53E+1	7.17E+1
GWP-b	kg CO2 eq	4.11E-1	1.66E-3	1.20E-1	5.32E-1	6.71E-4	-4.16E-2	4.60E-4	-2.10E-1	2.82E-1
GWP-luluc	kg CO2 eq	2.55E-2	1.51E-3	1.34E-1	1.61E-1	3.91E-4	6.21E-3	8.79E-6	-1.26E-2	1.55E-1
ODP	kg CFC11 eq	4.35E-6	8.69E-7	1.78E-7	5.40E-6	2.55E-7	8.08E-7	1.31E-8	-2.65E-6	3.83E-6
AP	mol H+ eq	3.14E-1	2.94E-2	7.40E-3	3.51E-1	6.30E-3	3.40E-2	3.12E-4	-1.53E-1	2.39E-1
EP-fw	kg P eq	1.40E-3	3.84E-5	2.86E-5	1.47E-3	9.10E-6	1.79E-4	4.05E-7	-6.89E-4	9.67E-4
EP-m	kg N eq	5.25E-2	9.55E-3	1.61E-3	6.37E-2	2.25E-3	9.89E-3	2.21E-4	-2.80E-2	4.81E-2
EP-T	mol N eq	5.87E-1	1.05E-1	1.60E-2	7.08E-1	2.48E-2	1.09E-1	1.27E-3	-3.11E-1	5.32E-1
POCP	kg NMVOC eq	2.80E-1	2.95E-2	4.61E-3	3.14E-1	7.10E-3	3.44E-2	4.96E-4	-1.45E-1	2.11E-1
ADP-mm	kg Sb eq	8.18E-4	9.58E-5	3.43E-5	9.49E-4	2.86E-5	1.34E-4	3.13E-7	-3.57E-4	7.55E-4
ADP-f	MJ	2.97E+3	5.91E+1	1.53E+1	3.05E+3	1.70E+1	1.08E+2	9.54E-1	-1.66E+3	1.51E+3
WDP	m3 depriv.	6.47E+1	2.05E-1	7.85E+0	7.28E+1	5.21E-2	2.12E+0	4.37E-3	-3.22E+1	4.28E+1
PM	disease inc.	2.94E-6	3.41E-7	7.00E-8	3.35E-6	9.98E-8	5.59E-7	6.56E-9	-1.21E-6	2.81E-6
IR	kBq U-235 eq	2.51E+0	2.48E-1	4.40E-2	2.80E+0	7.42E-2	3.25E-1	4.45E-3	-1.00E+0	2.20E+0
ETP-fw	CTUe	5.41E+2	5.19E+1	3.52E+1	6.28E+2	1.38E+1	1.22E+2	8.41E-1	-2.41E+2	5.25E+2
HTP-c	CTUh	2.23E-8	1.75E-9	1.30E-9	2.54E-8	4.90E-10	1.45E-8	2.32E-11	-1.15E-8	2.90E-8
HTP-nc	CTUh	5.29E-7	5.62E-8	3.28E-8	6.18E-7	1.64E-8	1.83E-7	5.35E-10	-2.56E-7	5.63E-7
SQP	Pt	1.13E+2	4.91E+1	1.59E+0	1.64E+2	1.45E+1	8.61E+1	2.45E+0	-5.26E+1	2.15E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.84E+1	7.21E-1	7.22E+1	1.21E+2	2.43E-1	5.32E+0	3.78E-2	-2.40E+1	1.03E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.84E+1	7.21E-1	7.22E+1	1.21E+2	2.43E-1	5.32E+0	3.78E-2	-2.40E+1	1.03E+2
PENRE	MJ	3.19E+3	6.28E+1	1.64E+1	3.27E+3	1.80E+1	1.15E+2	1.01E+0	-1.79E+3	1.61E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.19E+3	6.28E+1	1.64E+1	3.27E+3	1.80E+1	1.15E+2	1.01E+0	-1.79E+3	1.61E+3
PET	MJ	3.24E+3	6.35E+1	8.86E+1	3.39E+3	1.83E+1	1.20E+2	1.05E+0	-1.81E+3	1.72E+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	9.84E-1	6.98E-3	1.87E-1	1.18E+0	1.92E-3	6.23E-2	1.18E-3	-4.92E-1	7.50E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.02E-4	1.45E-4	2.70E-5	5.74E-4	4.34E-5	1.75E-4	1.15E-6	-4.87E-4	3.06E-4
NHWD	kg	2.78E+0	3.56E+0	3.34E-2	6.37E+0	1.05E+0	5.29E+0	4.20E+0	-1.35E+0	1.56E+1
RWD	kg	2.69E-3	3.90E-4	6.44E-5	3.14E-3	1.15E-4	4.11E-4	6.24E-6	-9.29E-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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