

Environmental Profile

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

Ecochain v3.5.64



Product: 3053602 - SafeTech RCn PotW Pp 225x20.5 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]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	3.21E+2	1.50E+1	6.14E+0	3.42E+2	4.20E+0	1.37E+2	2.33E+0	-2.11E+2	2.74E+2
GWP-f	kg CO2 eq	3.19E+2	1.50E+1	5.09E+0	3.39E+2	4.20E+0	1.37E+2	2.33E+0	-2.10E+2	2.73E+2
GWP-b	kg CO2 eq	1.56E+0	6.32E-3	4.96E-1	2.07E+0	2.55E-3	-1.61E-1	1.75E-3	-7.96E-1	1.11E+0
GWP-luluc	kg CO2 eq	9.69E-2	5.74E-3	5.56E-1	6.59E-1	1.49E-3	2.36E-2	3.34E-5	-4.78E-2	6.36E-1
ODP	kg CFC11 eq	1.65E-5	3.30E-6	6.90E-7	2.05E-5	9.68E-7	3.07E-6	4.97E-8	-1.01E-5	1.46E-5
AP	mol H+ eq	1.19E+0	1.12E-1	2.97E-2	1.34E+0	2.39E-2	1.29E-1	1.18E-3	-5.82E-1	9.08E-1
EP-fw	kg P eq	5.32E-3	1.46E-4	1.14E-4	5.58E-3	3.46E-5	6.81E-4	1.54E-6	-2.62E-3	3.68E-3
EP-m	kg N eq	1.99E-1	3.63E-2	6.31E-3	2.42E-1	8.56E-3	3.76E-2	8.38E-4	-1.06E-1	1.83E-1
EP-T	mol N eq	2.23E+0	4.01E-1	6.30E-2	2.69E+0	9.44E-2	4.13E-1	4.81E-3	-1.18E+0	2.02E+0
POCP	kg NMVOC eq	1.06E+0	1.12E-1	1.81E-2	1.19E+0	2.70E-2	1.31E-1	1.89E-3	-5.51E-1	8.01E-1
ADP-mm	kg Sb eq	3.11E-3	3.64E-4	1.42E-4	3.62E-3	1.09E-4	5.11E-4	1.19E-6	-1.36E-3	2.88E-3
ADP-f	MJ	1.13E+4	2.25E+2	6.03E+1	1.16E+4	6.45E+1	4.09E+2	3.63E+0	-6.30E+3	5.75E+3
WDP	m3 depriv.	2.46E+2	7.78E-1	3.24E+1	2.79E+2	1.98E-1	8.04E+0	1.66E-2	-1.22E+2	1.65E+2
PM	disease inc.	1.12E-5	1.30E-6	2.74E-7	1.27E-5	3.79E-7	2.12E-6	2.49E-8	-4.60E-6	1.07E-5
IR	kBq U-235 eq	9.53E+0	9.43E-1	1.69E-1	1.06E+1	2.82E-1	1.23E+0	1.69E-2	-3.80E+0	8.37E+0
ETP-fw	CTUe	2.06E+3	1.97E+2	1.43E+2	2.40E+3	5.24E+1	4.65E+2	3.20E+0	-9.15E+2	2.00E+3
HTP-c	CTUh	8.49E-8	6.64E-9	5.29E-9	9.68E-8	1.86E-9	5.51E-8	8.81E-11	-4.35E-8	1.10E-7
HTP-nc	CTUh	2.01E-6	2.14E-7	1.35E-7	2.36E-6	6.24E-8	6.97E-7	2.03E-9	-9.73E-7	2.15E-6
SQP	Pt	4.31E+2	1.86E+2	6.06E+0	6.23E+2	5.52E+1	3.27E+2	9.30E+0	-2.00E+2	8.15E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.84E+2	2.74E+0	3.00E+2	4.87E+2	9.25E-1	2.02E+1	1.43E-1	-9.11E+1	4.17E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.84E+2	2.74E+0	3.00E+2	4.87E+2	9.25E-1	2.02E+1	1.43E-1	-9.11E+1	4.17E+2
PENRE	MJ	1.21E+4	2.39E+2	6.45E+1	1.24E+4	6.85E+1	4.36E+2	3.85E+0	-6.80E+3	6.13E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.21E+4	2.39E+2	6.45E+1	1.24E+4	6.85E+1	4.36E+2	3.85E+0	-6.80E+3	6.13E+3
PET	MJ	1.23E+4	2.41E+2	3.64E+2	1.29E+4	6.94E+1	4.56E+2	3.99E+0	-6.89E+3	6.54E+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	3.74E+0	2.65E-2	7.71E-1	4.53E+0	7.30E-3	2.37E-1	4.48E-3	-1.87E+0	2.91E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.53E-3	5.50E-4	1.02E-4	2.18E-3	1.65E-4	6.67E-4	4.35E-6	-1.85E-3	1.16E-3
NHWD	kg	1.05E+1	1.35E+1	1.28E-1	2.42E+1	4.00E+0	2.01E+1	1.60E+1	-5.13E+0	5.92E+1
RWD	kg	1.02E-2	1.48E-3	2.45E-4	1.19E-2	4.39E-4	1.56E-3	2.37E-5	-3.53E-3	1.04E-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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