

Environmental Profile

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

Ecochain v3.5.64



Product: 3074319 - SafeTech RCn PotW Pp 160x9.5 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	5.51E+1	2.59E+0	1.11E+0	5.88E+1	7.23E-1	2.35E+1	4.00E-1	-3.62E+1	4.72E+1
GWP-f	kg CO2 eq	5.49E+1	2.58E+0	9.13E-1	5.84E+1	7.22E-1	2.35E+1	4.00E-1	-3.61E+1	4.69E+1
GWP-b	kg CO2 eq	2.67E-1	1.09E-3	9.28E-2	3.61E-1	4.38E-4	-2.61E-2	3.00E-4	-1.37E-1	1.99E-1
GWP-luluc	kg CO2 eq	1.67E-2	9.87E-4	1.04E-1	1.22E-1	2.55E-4	4.06E-3	5.74E-6	-8.21E-3	1.18E-1
ODP	kg CFC11 eq	2.84E-6	5.67E-7	1.21E-7	3.53E-6	1.66E-7	5.28E-7	8.53E-9	-1.73E-6	2.50E-6
AP	mol H+ eq	2.05E-1	1.92E-2	5.39E-3	2.30E-1	4.11E-3	2.22E-2	2.04E-4	-9.99E-2	1.56E-1
EP-fw	kg P eq	9.15E-4	2.51E-5	2.07E-5	9.60E-4	5.94E-6	1.17E-4	2.64E-7	-4.50E-4	6.34E-4
EP-m	kg N eq	3.43E-2	6.23E-3	1.12E-3	4.17E-2	1.47E-3	6.46E-3	1.44E-4	-1.83E-2	3.15E-2
EP-T	mol N eq	3.83E-1	6.88E-2	1.12E-2	4.63E-1	1.62E-2	7.11E-2	8.27E-4	-2.03E-1	3.48E-1
POCP	kg NMVOC eq	1.83E-1	1.93E-2	3.24E-3	2.05E-1	4.64E-3	2.25E-2	3.24E-4	-9.48E-2	1.38E-1
ADP-mm	kg Sb eq	5.34E-4	6.26E-5	2.66E-5	6.24E-4	1.87E-5	8.78E-5	2.04E-7	-2.33E-4	4.97E-4
ADP-f	MJ	1.94E+3	3.86E+1	1.08E+1	1.99E+3	1.11E+1	7.04E+1	6.23E-1	-1.08E+3	9.90E+2
WDP	m3 depriv.	4.23E+1	1.34E-1	6.05E+0	4.85E+1	3.40E-2	1.38E+0	2.85E-3	-2.10E+1	2.89E+1
PM	disease inc.	1.92E-6	2.23E-7	4.86E-8	2.19E-6	6.52E-8	3.65E-7	4.28E-9	-7.90E-7	1.84E-6
IR	kBq U-235 eq	1.64E+0	1.62E-1	2.92E-2	1.83E+0	4.84E-2	2.12E-1	2.90E-3	-6.53E-1	1.44E+0
ETP-fw	CTUe	3.54E+2	3.39E+1	2.62E+1	4.14E+2	9.00E+0	7.98E+1	5.49E-1	-1.57E+2	3.46E+2
HTP-c	CTUh	1.46E-8	1.14E-9	9.73E-10	1.67E-8	3.20E-10	9.47E-9	1.51E-11	-7.48E-9	1.90E-8
HTP-nc	CTUh	3.46E-7	3.67E-8	2.50E-8	4.07E-7	1.07E-8	1.20E-7	3.49E-10	-1.67E-7	3.71E-7
SQP	Pt	7.42E+1	3.20E+1	1.05E+0	1.07E+2	9.48E+0	5.62E+1	1.60E+0	-3.44E+1	1.40E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.16E+1	4.71E-1	5.63E+1	8.84E+1	1.59E-1	3.47E+0	2.47E-2	-1.57E+1	7.64E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.16E+1	4.71E-1	5.63E+1	8.84E+1	1.59E-1	3.47E+0	2.47E-2	-1.57E+1	7.64E+1
PENRE	MJ	2.08E+3	4.10E+1	1.15E+1	2.13E+3	1.18E+1	7.50E+1	6.61E-1	-1.17E+3	1.05E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.08E+3	4.10E+1	1.15E+1	2.13E+3	1.18E+1	7.50E+1	6.61E-1	-1.17E+3	1.05E+3
PET	MJ	2.11E+3	4.15E+1	6.78E+1	2.22E+3	1.19E+1	7.84E+1	6.86E-1	-1.18E+3	1.13E+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	6.43E-1	4.56E-3	1.44E-1	7.91E-1	1.25E-3	4.07E-2	7.70E-4	-3.21E-1	5.12E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.62E-4	9.46E-5	1.76E-5	3.75E-4	2.83E-5	1.15E-4	7.48E-7	-3.18E-4	2.00E-4
NHWD	kg	1.81E+0	2.33E+0	2.21E-2	4.16E+0	6.87E-1	3.46E+0	2.75E+0	-8.82E-1	1.02E+1
RWD	kg	1.76E-3	2.54E-4	4.21E-5	2.05E-3	7.54E-5	2.68E-4	4.07E-6	-6.07E-4	1.79E-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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