

Environmental Profile

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

Ecochain v3.5.64



Product: 3015375 - SafeTech RCn PotW Pp 315x18.7 L=12
Unit: 1 piece
Manufacturer: Wavin - DE - Westeregeln - verified
Address: Borrweg 10
39448 Börde-Hakel
Germany
Contact: <https://www.wavin.com/en-en>

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	4.25E+2	1.99E+1	9.21E+0	4.55E+2	5.56E+0	1.82E+2	3.08E+0	-2.79E+2	3.65E+2
GWP-f	kg CO2 eq	4.23E+2	1.99E+1	7.50E+0	4.51E+2	5.56E+0	1.82E+2	3.08E+0	-2.78E+2	3.63E+2
GWP-b	kg CO2 eq	2.05E+0	8.37E-3	8.03E-1	2.86E+0	3.38E-3	-2.10E-1	2.31E-3	-1.05E+0	1.61E+0
GWP-luluc	kg CO2 eq	1.29E-1	7.60E-3	9.07E-1	1.04E+0	1.97E-3	3.12E-2	4.42E-5	-6.33E-2	1.01E+0
ODP	kg CFC11 eq	2.19E-5	4.37E-6	9.57E-7	2.73E-5	1.28E-6	4.07E-6	6.57E-8	-1.34E-5	1.93E-5
AP	mol H+ eq	1.58E+0	1.48E-1	4.49E-2	1.78E+0	3.17E-2	1.71E-1	1.57E-3	-7.70E-1	1.21E+0
EP-fw	kg P eq	7.07E-3	1.93E-4	1.72E-4	7.44E-3	4.57E-5	9.01E-4	2.04E-6	-3.46E-3	4.92E-3
EP-m	kg N eq	2.65E-1	4.80E-2	9.01E-3	3.22E-1	1.13E-2	4.98E-2	1.11E-3	-1.41E-1	2.43E-1
EP-T	mol N eq	2.96E+0	5.30E-1	9.13E-2	3.58E+0	1.25E-1	5.48E-1	6.37E-3	-1.57E+0	2.69E+0
POCP	kg NMVOC eq	1.41E+0	1.48E-1	2.63E-2	1.58E+0	3.57E-2	1.73E-1	2.50E-3	-7.30E-1	1.07E+0
ADP-mm	kg Sb eq	4.12E-3	4.82E-4	2.30E-4	4.84E-3	1.44E-4	6.76E-4	1.57E-6	-1.80E-3	3.86E-3
ADP-f	MJ	1.50E+4	2.97E+2	8.75E+1	1.54E+4	8.53E+1	5.42E+2	4.80E+0	-8.34E+3	7.64E+3
WDP	m3 depriv.	3.26E+2	1.03E+0	5.23E+1	3.79E+2	2.62E-1	1.06E+1	2.20E-2	-1.62E+2	2.28E+2
PM	disease inc.	1.48E-5	1.72E-6	3.92E-7	1.69E-5	5.02E-7	2.81E-6	3.30E-8	-6.09E-6	1.42E-5
IR	kBq U-235 eq	1.26E+1	1.25E+0	2.28E-1	1.41E+1	3.73E-1	1.63E+0	2.24E-2	-5.03E+0	1.11E+1
ETP-fw	CTUe	2.74E+3	2.61E+2	2.21E+2	3.22E+3	6.93E+1	6.15E+2	4.23E+0	-1.21E+3	2.69E+3
HTP-c	CTUh	1.13E-7	8.79E-9	8.24E-9	1.30E-7	2.47E-9	7.30E-8	1.17E-10	-5.76E-8	1.48E-7
HTP-nc	CTUh	2.67E-6	2.83E-7	2.14E-7	3.17E-6	8.26E-8	9.23E-7	2.69E-9	-1.29E-6	2.89E-6
SQP	Pt	5.74E+2	2.47E+2	8.10E+0	8.29E+2	7.30E+1	4.33E+2	1.23E+1	-2.65E+2	1.08E+3
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.45E+2	3.63E+0	4.89E+2	7.37E+2	1.22E+0	2.67E+1	1.90E-1	-1.21E+2	6.45E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.45E+2	3.63E+0	4.89E+2	7.37E+2	1.22E+0	2.67E+1	1.90E-1	-1.21E+2	6.45E+2
PENRE	MJ	1.61E+4	3.16E+2	9.35E+1	1.65E+4	9.06E+1	5.77E+2	5.09E+0	-9.00E+3	8.14E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.61E+4	3.16E+2	9.35E+1	1.65E+4	9.06E+1	5.77E+2	5.09E+0	-9.00E+3	8.14E+3
PET	MJ	1.63E+4	3.19E+2	5.83E+2	1.72E+4	9.18E+1	6.04E+2	5.28E+0	-9.12E+3	8.78E+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	4.96E+0	3.51E-2	1.24E+0	6.23E+0	9.66E-3	3.13E-1	5.93E-3	-2.48E+0	4.09E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.04E-3	7.29E-4	1.36E-4	2.90E-3	2.18E-4	8.83E-4	5.76E-6	-2.46E-3	1.55E-3
NHWD	kg	1.40E+1	1.79E+1	1.72E-1	3.21E+1	5.29E+0	2.67E+1	2.11E+1	-6.80E+0	7.84E+1
RWD	kg	1.36E-2	1.96E-3	3.24E-4	1.58E-2	5.80E-4	2.07E-3	3.14E-5	-4.68E-3	1.38E-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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