

Environmental Profile

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

Ecochain v3.5.64



Product: 3072755 - SafeTech RCn PotW Pp 225x13.4 L=6 BC
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]

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	1.10E+2	5.11E+0	2.11E+0	1.17E+2	1.43E+0	4.69E+1	7.90E-1	-7.19E+1	9.41E+1
GWP-f	kg CO2 eq	1.09E+2	5.11E+0	1.75E+0	1.16E+2	1.43E+0	4.69E+1	7.90E-1	-7.16E+1	9.35E+1
GWP-b	kg CO2 eq	5.19E-1	2.15E-3	1.72E-1	6.94E-1	8.66E-4	-5.30E-2	5.93E-4	-2.70E-1	3.72E-1
GWP-luluc	kg CO2 eq	3.35E-2	1.95E-3	1.93E-1	2.29E-1	5.05E-4	8.02E-3	1.13E-5	-1.62E-2	2.21E-1
ODP	kg CFC11 eq	5.65E-6	1.12E-6	2.35E-7	7.01E-6	3.29E-7	1.04E-6	1.69E-8	-3.45E-6	4.94E-6
AP	mol H+ eq	4.09E-1	3.79E-2	1.02E-2	4.57E-1	8.12E-3	4.39E-2	4.02E-4	-1.98E-1	3.12E-1
EP-fw	kg P eq	1.83E-3	4.96E-5	3.93E-5	1.92E-3	1.17E-5	2.31E-4	5.22E-7	-8.89E-4	1.27E-3
EP-m	kg N eq	6.83E-2	1.23E-2	2.16E-3	8.28E-2	2.91E-3	1.28E-2	2.85E-4	-3.62E-2	6.26E-2
EP-T	mol N eq	7.63E-1	1.36E-1	2.16E-2	9.21E-1	3.20E-2	1.41E-1	1.63E-3	-4.02E-1	6.93E-1
POCP	kg NMVOC eq	3.64E-1	3.81E-2	6.22E-3	4.08E-1	9.16E-3	4.45E-2	6.40E-4	-1.88E-1	2.75E-1
ADP-mm	kg Sb eq	1.06E-3	1.24E-4	4.93E-5	1.23E-3	3.69E-5	1.74E-4	4.04E-7	-4.61E-4	9.85E-4
ADP-f	MJ	3.85E+3	7.63E+1	2.07E+1	3.95E+3	2.19E+1	1.39E+2	1.23E+0	-2.14E+3	1.97E+3
WDP	m3 depriv.	8.39E+1	2.64E-1	1.13E+1	9.54E+1	6.72E-2	2.73E+0	5.64E-3	-4.16E+1	5.66E+1
PM	disease inc.	3.82E-6	4.40E-7	9.38E-8	4.35E-6	1.29E-7	7.22E-7	8.46E-9	-1.56E-6	3.65E-6
IR	kBq U-235 eq	3.26E+0	3.20E-1	5.74E-2	3.64E+0	9.57E-2	4.19E-1	5.74E-3	-1.29E+0	2.87E+0
ETP-fw	CTUe	7.08E+2	6.71E+1	4.93E+1	8.25E+2	1.78E+1	1.58E+2	1.09E+0	-3.11E+2	6.90E+2
HTP-c	CTUh	2.90E-8	2.26E-9	1.83E-9	3.31E-8	6.33E-10	1.88E-8	2.99E-11	-1.48E-8	3.78E-8
HTP-nc	CTUh	6.89E-7	7.26E-8	4.66E-8	8.08E-7	2.12E-8	2.37E-7	6.90E-10	-3.31E-7	7.36E-7
SQP	Pt	1.49E+2	6.33E+1	2.06E+0	2.14E+2	1.87E+1	1.11E+2	3.16E+0	-6.81E+1	2.79E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	6.33E+1	9.31E-1	1.04E+2	1.68E+2	3.14E-1	6.86E+0	4.87E-2	-3.10E+1	1.45E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	6.33E+1	9.31E-1	1.04E+2	1.68E+2	3.14E-1	6.86E+0	4.87E-2	-3.10E+1	1.45E+2
PENRE	MJ	4.13E+3	8.11E+1	2.21E+1	4.23E+3	2.32E+1	1.48E+2	1.31E+0	-2.31E+3	2.09E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.13E+3	8.11E+1	2.21E+1	4.23E+3	2.32E+1	1.48E+2	1.31E+0	-2.31E+3	2.09E+3
PET	MJ	4.19E+3	8.20E+1	1.26E+2	4.40E+3	2.36E+1	1.55E+2	1.35E+0	-2.34E+3	2.24E+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	1.28E+0	9.01E-3	2.67E-1	1.55E+0	2.48E-3	8.04E-2	1.52E-3	-6.36E-1	1.00E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.29E-4	1.87E-4	3.48E-5	7.51E-4	5.60E-5	2.27E-4	1.48E-6	-6.35E-4	4.01E-4
NHWD	kg	3.63E+0	4.60E+0	4.34E-2	8.28E+0	1.36E+0	6.85E+0	5.42E+0	-1.74E+0	2.02E+1
RWD	kg	3.49E-3	5.03E-4	8.31E-5	4.08E-3	1.49E-4	5.31E-4	8.05E-6	-1.20E-3	3.57E-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



Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
<https://www.ecochain.com>
+31 20 3035 777