

Environmental Profile

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

Ecochain v3.5.64



Product: 3072740 - SafeTech RCn PotW Pp 110x6.6 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]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.64E+1	1.24E+0	4.92E-1	2.82E+1	3.46E-1	1.13E+1	1.92E-1	-1.74E+1	2.26E+1
GWP-f	kg CO2 eq	2.63E+1	1.24E+0	4.09E-1	2.79E+1	3.46E-1	1.13E+1	1.92E-1	-1.73E+1	2.25E+1
GWP-b	kg CO2 eq	1.28E-1	5.20E-4	3.90E-2	1.68E-1	2.10E-4	-1.27E-2	1.44E-4	-6.56E-2	8.98E-2
GWP-luluc	kg CO2 eq	7.98E-3	4.73E-4	4.36E-2	5.21E-2	1.22E-4	1.94E-3	2.75E-6	-3.94E-3	5.02E-2
ODP	kg CFC11 eq	1.36E-6	2.72E-7	5.63E-8	1.69E-6	7.97E-8	2.53E-7	4.09E-9	-8.30E-7	1.20E-6
AP	mol H+ eq	9.84E-2	9.19E-3	2.37E-3	1.10E-1	1.97E-3	1.06E-2	9.76E-5	-4.79E-2	7.48E-2
EP-fw	kg P eq	4.38E-4	1.20E-5	9.15E-6	4.60E-4	2.85E-6	5.61E-5	1.27E-7	-2.16E-4	3.03E-4
EP-m	kg N eq	1.65E-2	2.99E-3	5.11E-4	1.99E-2	7.05E-4	3.09E-3	6.90E-5	-8.76E-3	1.51E-2
EP-T	mol N eq	1.84E-1	3.30E-2	5.09E-3	2.22E-1	7.77E-3	3.41E-2	3.96E-4	-9.74E-2	1.67E-1
POCP	kg NMVOC eq	8.76E-2	9.23E-3	1.46E-3	9.83E-2	2.22E-3	1.08E-2	1.55E-4	-4.54E-2	6.60E-2
ADP-mm	kg Sb eq	2.56E-4	3.00E-5	1.12E-5	2.97E-4	8.95E-6	4.21E-5	9.79E-8	-1.12E-4	2.37E-4
ADP-f	MJ	9.30E+2	1.85E+1	4.87E+0	9.54E+2	5.31E+0	3.37E+1	2.99E-1	-5.19E+2	4.74E+2
WDP	m3 depriv.	2.03E+1	6.40E-2	2.55E+0	2.29E+1	1.63E-2	6.62E-1	1.37E-3	-1.01E+1	1.35E+1
PM	disease inc.	9.21E-7	1.07E-7	2.22E-8	1.05E-6	3.12E-8	1.75E-7	2.05E-9	-3.79E-7	8.79E-7
IR	kBq U-235 eq	7.85E-1	7.76E-2	1.38E-2	8.77E-1	2.32E-2	1.02E-1	1.39E-3	-3.13E-1	6.90E-1
ETP-fw	CTUe	1.69E+2	1.63E+1	1.13E+1	1.97E+2	4.31E+0	3.83E+1	2.63E-1	-7.54E+1	1.65E+2
HTP-c	CTUh	6.99E-9	5.47E-10	4.20E-10	7.96E-9	1.53E-10	4.54E-9	7.25E-12	-3.58E-9	9.08E-9
HTP-nc	CTUh	1.66E-7	1.76E-8	1.06E-8	1.94E-7	5.14E-9	5.74E-8	1.67E-10	-8.01E-8	1.77E-7
SQP	Pt	3.56E+1	1.54E+1	4.98E-1	5.14E+1	4.54E+0	2.69E+1	7.66E-1	-1.65E+1	6.72E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.52E+1	2.26E-1	2.35E+1	3.89E+1	7.62E-2	1.66E+0	1.18E-2	-7.51E+0	3.32E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.52E+1	2.26E-1	2.35E+1	3.89E+1	7.62E-2	1.66E+0	1.18E-2	-7.51E+0	3.32E+1
PENRE	MJ	9.98E+2	1.96E+1	5.20E+0	1.02E+3	5.64E+0	3.59E+1	3.17E-1	-5.60E+2	5.05E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	9.98E+2	1.96E+1	5.20E+0	1.02E+3	5.64E+0	3.59E+1	3.17E-1	-5.60E+2	5.05E+2
PET	MJ	1.01E+3	1.99E+1	2.87E+1	1.06E+3	5.71E+0	3.76E+1	3.29E-1	-5.67E+2	5.38E+2
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	3.08E-1	2.18E-3	6.07E-2	3.71E-1	6.01E-4	1.95E-2	3.69E-4	-1.54E-1	2.37E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.26E-4	4.53E-5	8.43E-6	1.80E-4	1.36E-5	5.49E-5	3.58E-7	-1.53E-4	9.59E-5
NHWD	kg	8.69E-1	1.12E+0	1.05E-2	1.99E+0	3.29E-1	1.66E+0	1.32E+0	-4.23E-1	4.87E+0
RWD	kg	8.42E-4	1.22E-4	2.02E-5	9.84E-4	3.61E-5	1.29E-4	1.95E-6	-2.91E-4	8.60E-4
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