

Environmental Profile

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

Ecochain v3.5.64



Product: 3015439 - SafeTech RCn PotW Pp 315x28.6 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	6.25E+2	2.93E+1	1.35E+1	6.68E+2	8.19E+0	2.67E+2	4.53E+0	-4.11E+2	5.37E+2
GWP-f	kg CO2 eq	6.22E+2	2.93E+1	1.10E+1	6.63E+2	8.18E+0	2.67E+2	4.53E+0	-4.09E+2	5.33E+2
GWP-b	kg CO2 eq	3.03E+0	1.23E-2	1.18E+0	4.23E+0	4.97E-3	-3.15E-1	3.40E-3	-1.55E+0	2.37E+0
GWP-luluc	kg CO2 eq	1.89E-1	1.12E-2	1.34E+0	1.54E+0	2.90E-3	4.60E-2	6.50E-5	-9.31E-2	1.49E+0
ODP	kg CFC11 eq	3.23E-5	6.43E-6	1.41E-6	4.01E-5	1.89E-6	5.98E-6	9.67E-8	-1.97E-5	2.84E-5
AP	mol H+ eq	2.33E+0	2.17E-1	6.61E-2	2.61E+0	4.66E-2	2.52E-1	2.31E-3	-1.13E+0	1.78E+0
EP-fw	kg P eq	1.04E-2	2.84E-4	2.52E-4	1.09E-2	6.73E-5	1.33E-3	3.00E-6	-5.10E-3	7.22E-3
EP-m	kg N eq	3.89E-1	7.07E-2	1.33E-2	4.73E-1	1.67E-2	7.32E-2	1.63E-3	-2.07E-1	3.58E-1
EP-T	mol N eq	4.35E+0	7.80E-1	1.34E-1	5.26E+0	1.84E-1	8.06E-1	9.37E-3	-2.30E+0	3.96E+0
POCP	kg NMVOC eq	2.07E+0	2.18E-1	3.87E-2	2.33E+0	5.25E-2	2.55E-1	3.67E-3	-1.07E+0	1.57E+0
ADP-mm	kg Sb eq	6.06E-3	7.09E-4	3.39E-4	7.11E-3	2.12E-4	9.95E-4	2.32E-6	-2.64E-3	5.68E-3
ADP-f	MJ	2.20E+4	4.38E+2	1.29E+2	2.26E+4	1.26E+2	7.97E+2	7.06E+0	-1.23E+4	1.12E+4
WDP	m3 depriv.	4.79E+2	1.51E+0	7.69E+1	5.58E+2	3.85E-1	1.57E+1	3.23E-2	-2.38E+2	3.36E+2
PM	disease inc.	2.18E-5	2.52E-6	5.76E-7	2.49E-5	7.39E-7	4.14E-6	4.85E-8	-8.96E-6	2.09E-5
IR	kBq U-235 eq	1.86E+1	1.84E+0	3.35E-1	2.08E+1	5.49E-1	2.40E+0	3.29E-2	-7.41E+0	1.63E+1
ETP-fw	CTUe	4.02E+3	3.84E+2	3.25E+2	4.73E+3	1.02E+2	9.05E+2	6.22E+0	-1.78E+3	3.96E+3
HTP-c	CTUh	1.66E-7	1.29E-8	1.21E-8	1.91E-7	3.63E-9	1.07E-7	1.71E-10	-8.48E-8	2.17E-7
HTP-nc	CTUh	3.92E-6	4.16E-7	3.15E-7	4.66E-6	1.22E-7	1.36E-6	3.96E-9	-1.90E-6	4.24E-6
SQP	Pt	8.42E+2	3.63E+2	1.19E+1	1.22E+3	1.07E+2	6.37E+2	1.81E+1	-3.89E+2	1.59E+3
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.59E+2	5.34E+0	7.20E+2	1.08E+3	1.80E+0	3.93E+1	2.79E-1	-1.77E+2	9.48E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.59E+2	5.34E+0	7.20E+2	1.08E+3	1.80E+0	3.93E+1	2.79E-1	-1.77E+2	9.48E+2
PENRE	MJ	2.36E+4	4.65E+2	1.38E+2	2.42E+4	1.33E+2	8.49E+2	7.49E+0	-1.32E+4	1.20E+4
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.36E+4	4.65E+2	1.38E+2	2.42E+4	1.33E+2	8.49E+2	7.49E+0	-1.32E+4	1.20E+4
PET	MJ	2.40E+4	4.70E+2	8.57E+2	2.53E+4	1.35E+2	8.89E+2	7.77E+0	-1.34E+4	1.29E+4
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	7.29E+0	5.16E-2	1.83E+0	9.16E+0	1.42E-2	4.61E-1	8.73E-3	-3.64E+0	6.01E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.99E-3	1.07E-3	1.99E-4	4.26E-3	3.21E-4	1.30E-3	8.48E-6	-3.61E-3	2.27E-3
NHWD	kg	2.06E+1	2.64E+1	2.53E-1	4.72E+1	7.78E+0	3.92E+1	3.11E+1	-1.00E+1	1.15E+2
RWD	kg	1.99E-2	2.88E-3	4.77E-4	2.33E-2	8.54E-4	3.04E-3	4.62E-5	-6.88E-3	2.04E-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



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