

Environmental Profile

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

Ecochain v3.5.64



Product: 3015415 - SafeTech RCn WWP Pp 125x11.4 L=100
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

This document and supporting material contain confidential and proprietary business information of Wavin - DE - Westeregeln - verified . These materials may be printed or (photo) copied or otherwise used only with the written consent of Wavin - DE - Westeregeln - verified .

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	8.28E+2	2.26E+1	1.51E+1	8.65E+2	1.09E+1	3.53E+2	6.01E+0	-5.44E+2	6.91E+2
GWP-f	kg CO2 eq	8.24E+2	2.26E+1	1.26E+1	8.59E+2	1.08E+1	3.53E+2	6.01E+0	-5.42E+2	6.87E+2
GWP-b	kg CO2 eq	4.05E+0	9.55E-3	1.18E+0	5.24E+0	6.59E-3	-4.34E-1	4.51E-3	-2.06E+0	2.76E+0
GWP-luluc	kg CO2 eq	2.51E-1	8.60E-3	1.31E+0	1.57E+0	3.84E-3	6.09E-2	8.64E-5	-1.23E-1	1.51E+0
ODP	kg CFC11 eq	4.28E-5	4.96E-6	1.75E-6	4.95E-5	2.50E-6	7.93E-6	1.28E-7	-2.60E-5	3.41E-5
AP	mol H+ eq	3.09E+0	1.65E-1	7.26E-2	3.32E+0	6.18E-2	3.33E-1	3.06E-3	-1.50E+0	2.22E+0
EP-fw	kg P eq	1.37E-2	2.20E-4	2.80E-4	1.42E-2	8.92E-5	1.76E-3	3.98E-6	-6.75E-3	9.33E-3
EP-m	kg N eq	5.15E-1	5.40E-2	1.58E-2	5.85E-1	2.21E-2	9.70E-2	2.16E-3	-2.74E-1	4.32E-1
EP-T	mol N eq	5.76E+0	5.96E-1	1.57E-1	6.51E+0	2.44E-1	1.07E+0	1.24E-2	-3.05E+0	4.78E+0
POCP	kg NMVOC eq	2.74E+0	1.67E-1	4.52E-2	2.95E+0	6.96E-2	3.37E-1	4.87E-3	-1.42E+0	1.94E+0
ADP-mm	kg Sb eq	8.16E-3	5.48E-4	3.37E-4	9.04E-3	2.81E-4	1.32E-3	3.07E-6	-3.50E-3	7.14E-3
ADP-f	MJ	2.91E+4	3.38E+2	1.50E+2	2.96E+4	1.66E+2	1.06E+3	9.36E+0	-1.63E+4	1.46E+4
WDP	m3 depriv.	6.35E+2	1.17E+0	7.71E+1	7.13E+2	5.11E-1	2.08E+1	4.34E-2	-3.16E+2	4.18E+2
PM	disease inc.	2.89E-5	1.95E-6	6.87E-7	3.15E-5	9.79E-7	5.48E-6	6.43E-8	-1.19E-5	2.62E-5
IR	kBq U-235 eq	2.46E+1	1.42E+0	4.32E-1	2.65E+1	7.28E-1	3.18E+0	4.36E-2	-9.81E+0	2.06E+1
ETP-fw	CTUe	5.33E+3	2.97E+2	3.45E+2	5.98E+3	1.35E+2	1.20E+3	8.25E+0	-2.36E+3	4.96E+3
HTP-c	CTUh	2.20E-7	9.97E-9	1.28E-8	2.42E-7	4.81E-9	1.43E-7	2.28E-10	-1.12E-7	2.78E-7
HTP-nc	CTUh	5.21E-6	3.22E-7	3.22E-7	5.85E-6	1.61E-7	1.80E-6	5.25E-9	-2.51E-6	5.31E-6
SQP	Pt	1.11E+3	2.81E+2	1.56E+1	1.41E+3	1.42E+2	8.44E+2	2.40E+1	-5.16E+2	1.91E+3
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.75E+2	4.13E+0	7.08E+2	1.19E+3	2.39E+0	5.21E+1	3.70E-1	-2.35E+2	1.01E+3
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.75E+2	4.13E+0	7.08E+2	1.19E+3	2.39E+0	5.21E+1	3.70E-1	-2.35E+2	1.01E+3
PENRE	MJ	3.12E+4	3.59E+2	1.60E+2	3.18E+4	1.77E+2	1.13E+3	9.93E+0	-1.75E+4	1.55E+4
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.12E+4	3.59E+2	1.60E+2	3.18E+4	1.77E+2	1.13E+3	9.93E+0	-1.75E+4	1.55E+4
PET	MJ	3.17E+4	3.63E+2	8.69E+2	3.29E+4	1.79E+2	1.18E+3	1.03E+1	-1.78E+4	1.65E+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	9.65E+0	3.99E-2	1.83E+0	1.15E+1	1.88E-2	6.11E-1	1.16E-2	-4.83E+0	7.33E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.96E-3	8.29E-4	2.64E-4	5.05E-3	4.26E-4	1.72E-3	1.12E-5	-4.77E-3	2.44E-3
NHWD	kg	2.74E+1	2.04E+1	3.27E-1	4.81E+1	1.03E+1	5.19E+1	4.12E+1	-1.32E+1	1.38E+2
RWD	kg	2.64E-2	2.22E-3	6.32E-4	2.93E-2	1.13E-3	4.03E-3	6.12E-5	-9.11E-3	2.54E-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