

Environmental Profile

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

Ecochain v3.5.64



Product: 3072736 - SafeTech RCn PotW Pp 75x4.5 L=100 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

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	2.07E+2	9.71E+0	4.25E+0	2.21E+2	2.71E+0	8.83E+1	1.50E+0	-1.36E+2	1.77E+2
GWP-f	kg CO2 eq	2.06E+2	9.70E+0	3.49E+0	2.19E+2	2.71E+0	8.83E+1	1.50E+0	-1.36E+2	1.76E+2
GWP-b	kg CO2 eq	1.01E+0	4.08E-3	3.59E-1	1.38E+0	1.65E-3	-1.08E-1	1.13E-3	-5.14E-1	7.56E-1
GWP-luluc	kg CO2 eq	6.26E-2	3.71E-3	4.04E-1	4.71E-1	9.60E-4	1.52E-2	2.16E-5	-3.08E-2	4.56E-1
ODP	kg CFC11 eq	1.07E-5	2.13E-6	4.57E-7	1.33E-5	6.25E-7	1.98E-6	3.20E-8	-6.50E-6	9.40E-6
AP	mol H+ eq	7.71E-1	7.21E-2	2.07E-2	8.63E-1	1.54E-2	8.33E-2	7.65E-4	-3.75E-1	5.88E-1
EP-fw	kg P eq	3.43E-3	9.42E-5	7.91E-5	3.60E-3	2.23E-5	4.39E-4	9.93E-7	-1.69E-3	2.38E-3
EP-m	kg N eq	1.29E-1	2.34E-2	4.25E-3	1.56E-1	5.53E-3	2.42E-2	5.41E-4	-6.86E-2	1.18E-1
EP-T	mol N eq	1.44E+0	2.59E-1	4.28E-2	1.74E+0	6.09E-2	2.67E-1	3.10E-3	-7.63E-1	1.31E+0
POCP	kg NMVOC eq	6.86E-1	7.24E-2	1.23E-2	7.71E-1	1.74E-2	8.44E-2	1.22E-3	-3.56E-1	5.18E-1
ADP-mm	kg Sb eq	2.01E-3	2.35E-4	1.03E-4	2.35E-3	7.01E-5	3.30E-4	7.67E-7	-8.76E-4	1.87E-3
ADP-f	MJ	7.29E+3	1.45E+2	4.10E+1	7.47E+3	4.16E+1	2.64E+2	2.34E+0	-4.07E+3	3.72E+3
WDP	m3 depriv.	1.59E+2	5.02E-1	2.34E+1	1.83E+2	1.28E-1	5.19E+0	1.07E-2	-7.90E+1	1.09E+2
PM	disease inc.	7.21E-6	8.37E-7	1.85E-7	8.23E-6	2.45E-7	1.37E-6	1.61E-8	-2.97E-6	6.90E-6
IR	kBq U-235 eq	6.15E+0	6.08E-1	1.10E-1	6.87E+0	1.82E-1	7.96E-1	1.09E-2	-2.45E+0	5.41E+0
ETP-fw	CTUe	1.33E+3	1.27E+2	1.01E+2	1.56E+3	3.38E+1	3.00E+2	2.06E+0	-5.91E+2	1.30E+3
HTP-c	CTUh	5.48E-8	4.29E-9	3.74E-9	6.28E-8	1.20E-9	3.56E-8	5.68E-11	-2.81E-8	7.16E-8
HTP-nc	CTUh	1.30E-6	1.38E-7	9.63E-8	1.53E-6	4.03E-8	4.50E-7	1.31E-9	-6.28E-7	1.40E-6
SQP	Pt	2.78E+2	1.20E+2	3.93E+0	4.02E+2	3.56E+1	2.11E+2	6.00E+0	-1.29E+2	5.26E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.19E+2	1.77E+0	2.18E+2	3.38E+2	5.97E-1	1.30E+1	9.26E-2	-5.88E+1	2.93E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.19E+2	1.77E+0	2.18E+2	3.38E+2	5.97E-1	1.30E+1	9.26E-2	-5.88E+1	2.93E+2
PENRE	MJ	7.82E+3	1.54E+2	4.38E+1	8.02E+3	4.42E+1	2.81E+2	2.48E+0	-4.39E+3	3.96E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.82E+3	1.54E+2	4.38E+1	8.02E+3	4.42E+1	2.81E+2	2.48E+0	-4.39E+3	3.96E+3
PET	MJ	7.94E+3	1.56E+2	2.62E+2	8.35E+3	4.48E+1	2.95E+2	2.58E+0	-4.45E+3	4.25E+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	2.41E+0	1.71E-2	5.56E-1	2.98E+0	4.71E-3	1.53E-1	2.89E-3	-1.21E+0	1.94E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	9.87E-4	3.55E-4	6.61E-5	1.41E-3	1.06E-4	4.30E-4	2.81E-6	-1.19E-3	7.52E-4
NHWD	kg	6.81E+0	8.74E+0	8.31E-2	1.56E+1	2.58E+0	1.30E+1	1.03E+1	-3.31E+0	3.82E+1
RWD	kg	6.60E-3	9.55E-4	1.58E-4	7.71E-3	2.83E-4	1.01E-3	1.53E-5	-2.28E-3	6.74E-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