

Environmental Profile

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

Ecochain v3.5.64



Product: 3053571 - SafeTech RCn Gas Pp 125x7.4 L=12 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	6.73E+1	2.97E+0	1.23E+0	7.15E+1	8.82E-1	2.87E+1	4.88E-1	-4.42E+1	5.73E+1
GWP-f	kg CO2 eq	6.70E+1	2.96E+0	1.03E+0	7.10E+1	8.81E-1	2.87E+1	4.88E-1	-4.40E+1	5.70E+1
GWP-b	kg CO2 eq	3.27E-1	1.24E-3	9.64E-2	4.24E-1	5.35E-4	-3.23E-2	3.67E-4	-1.67E-1	2.26E-1
GWP-luluc	kg CO2 eq	2.04E-2	1.13E-3	1.08E-1	1.29E-1	3.12E-4	4.95E-3	7.02E-6	-1.00E-2	1.25E-1
ODP	kg CFC11 eq	3.47E-6	6.51E-7	1.42E-7	4.26E-6	2.03E-7	6.44E-7	1.04E-8	-2.11E-6	3.01E-6
AP	mol H+ eq	2.51E-1	2.23E-2	5.93E-3	2.79E-1	5.02E-3	2.71E-2	2.49E-4	-1.22E-1	1.90E-1
EP-fw	kg P eq	1.12E-3	2.87E-5	2.29E-5	1.17E-3	7.25E-6	1.43E-4	3.23E-7	-5.49E-4	7.71E-4
EP-m	kg N eq	4.19E-2	7.21E-3	1.29E-3	5.04E-2	1.80E-3	7.88E-3	1.76E-4	-2.23E-2	3.80E-2
EP-T	mol N eq	4.68E-1	7.97E-2	1.28E-2	5.61E-1	1.98E-2	8.67E-2	1.01E-3	-2.48E-1	4.20E-1
POCP	kg NMVOC eq	2.23E-1	2.23E-2	3.69E-3	2.49E-1	5.66E-3	2.74E-2	3.96E-4	-1.16E-1	1.67E-1
ADP-mm	kg Sb eq	6.66E-4	7.16E-5	2.76E-5	7.65E-4	2.28E-5	1.07E-4	2.50E-7	-2.85E-4	6.10E-4
ADP-f	MJ	2.37E+3	4.43E+1	1.23E+1	2.42E+3	1.35E+1	8.59E+1	7.61E-1	-1.32E+3	1.20E+3
WDP	m3 depriv.	5.16E+1	1.53E-1	6.31E+0	5.81E+1	4.15E-2	1.69E+0	3.53E-3	-2.57E+1	3.42E+1
PM	disease inc.	2.35E-6	2.55E-7	5.60E-8	2.66E-6	7.96E-8	4.46E-7	5.23E-9	-9.65E-7	2.22E-6
IR	kBq U-235 eq	2.00E+0	1.86E-1	3.51E-2	2.22E+0	5.91E-2	2.59E-1	3.54E-3	-7.97E-1	1.74E+0
ETP-fw	CTUe	4.34E+2	3.88E+1	2.82E+1	5.01E+2	1.10E+1	9.75E+1	6.71E-1	-1.92E+2	4.18E+2
HTP-c	CTUh	1.79E-8	1.31E-9	1.04E-9	2.02E-8	3.91E-10	1.16E-8	1.85E-11	-9.13E-9	2.31E-8
HTP-nc	CTUh	4.24E-7	4.20E-8	2.64E-8	4.92E-7	1.31E-8	1.46E-7	4.27E-10	-2.04E-7	4.48E-7
SQP	Pt	9.08E+1	3.66E+1	1.27E+0	1.29E+2	1.16E+1	6.86E+1	1.95E+0	-4.20E+1	1.69E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.87E+1	5.39E-1	5.81E+1	9.73E+1	1.94E-1	4.24E+0	3.01E-2	-1.91E+1	8.26E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.87E+1	5.39E-1	5.81E+1	9.73E+1	1.94E-1	4.24E+0	3.01E-2	-1.91E+1	8.26E+1
PENRE	MJ	2.54E+3	4.70E+1	1.31E+1	2.60E+3	1.44E+1	9.15E+1	8.07E-1	-1.43E+3	1.28E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.54E+3	4.70E+1	1.31E+1	2.60E+3	1.44E+1	9.15E+1	8.07E-1	-1.43E+3	1.28E+3
PET	MJ	2.58E+3	4.75E+1	7.12E+1	2.70E+3	1.46E+1	9.57E+1	8.37E-1	-1.44E+3	1.36E+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	7.85E-1	5.21E-3	1.50E-1	9.41E-1	1.53E-3	4.96E-2	9.40E-4	-3.92E-1	6.00E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.22E-4	1.08E-4	2.15E-5	4.52E-4	3.46E-5	1.40E-4	9.14E-7	-3.88E-4	2.39E-4
NHWD	kg	2.23E+0	2.66E+0	2.66E-2	4.91E+0	8.39E-1	4.22E+0	3.35E+0	-1.08E+0	1.22E+1
RWD	kg	2.14E-3	2.92E-4	5.14E-5	2.48E-3	9.20E-5	3.28E-4	4.97E-6	-7.41E-4	2.17E-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