

Environmental Profile

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

Ecochain v3.5.64



Product: 3053572 - SafeTech RCn Gas Pp 125x11.4 L=12 BC
Unit: 1 piece
Manufacturer: Wavin - DE - Westeregeln - verified
Address: Borrweg 10
39448 Börde-Hakel
Germany
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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	9.94E+1	4.38E+0	1.83E+0	1.06E+2	1.30E+0	4.23E+1	7.21E-1	-6.53E+1	8.47E+1
GWP-f	kg CO2 eq	9.89E+1	4.38E+0	1.52E+0	1.05E+2	1.30E+0	4.24E+1	7.21E-1	-6.50E+1	8.42E+1
GWP-b	kg CO2 eq	4.84E-1	1.83E-3	1.44E-1	6.29E-1	7.90E-4	-4.91E-2	5.41E-4	-2.47E-1	3.35E-1
GWP-luluc	kg CO2 eq	3.01E-2	1.67E-3	1.61E-1	1.93E-1	4.61E-4	7.31E-3	1.04E-5	-1.48E-2	1.86E-1
ODP	kg CFC11 eq	5.12E-6	9.61E-7	2.11E-7	6.29E-6	3.00E-7	9.52E-7	1.54E-8	-3.12E-6	4.44E-6
AP	mol H+ eq	3.71E-1	3.29E-2	8.82E-3	4.12E-1	7.41E-3	4.00E-2	3.67E-4	-1.80E-1	2.80E-1
EP-fw	kg P eq	1.65E-3	4.24E-5	3.40E-5	1.73E-3	1.07E-5	2.11E-4	4.77E-7	-8.11E-4	1.14E-3
EP-m	kg N eq	6.19E-2	1.07E-2	1.91E-3	7.44E-2	2.65E-3	1.16E-2	2.60E-4	-3.29E-2	5.61E-2
EP-T	mol N eq	6.92E-1	1.18E-1	1.90E-2	8.28E-1	2.92E-2	1.28E-1	1.49E-3	-3.66E-1	6.21E-1
POCP	kg NMVOC eq	3.29E-1	3.29E-2	5.47E-3	3.68E-1	8.36E-3	4.05E-2	5.84E-4	-1.71E-1	2.46E-1
ADP-mm	kg Sb eq	9.83E-4	1.06E-4	4.12E-5	1.13E-3	3.37E-5	1.58E-4	3.69E-7	-4.20E-4	9.02E-4
ADP-f	MJ	3.49E+3	6.54E+1	1.82E+1	3.58E+3	2.00E+1	1.27E+2	1.12E+0	-1.95E+3	1.77E+3
WDP	m3 depriv.	7.62E+1	2.26E-1	9.43E+0	8.59E+1	6.13E-2	2.49E+0	5.21E-3	-3.79E+1	5.05E+1
PM	disease inc.	3.46E-6	3.76E-7	8.30E-8	3.92E-6	1.17E-7	6.58E-7	7.72E-9	-1.42E-6	3.28E-6
IR	kBq U-235 eq	2.95E+0	2.74E-1	5.19E-2	3.28E+0	8.73E-2	3.82E-1	5.23E-3	-1.18E+0	2.57E+0
ETP-fw	CTUe	6.40E+2	5.74E+1	4.21E+1	7.40E+2	1.62E+1	1.44E+2	9.90E-1	-2.83E+2	6.18E+2
HTP-c	CTUh	2.64E-8	1.93E-9	1.56E-9	2.99E-8	5.77E-10	1.71E-8	2.73E-11	-1.35E-8	3.41E-8
HTP-nc	CTUh	6.26E-7	6.20E-8	3.93E-8	7.27E-7	1.93E-8	2.16E-7	6.30E-10	-3.01E-7	6.62E-7
SQP	Pt	1.34E+2	5.41E+1	1.87E+0	1.90E+2	1.71E+1	1.01E+2	2.88E+0	-6.19E+1	2.49E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.71E+1	7.96E-1	8.68E+1	1.45E+2	2.87E-1	6.26E+0	4.44E-2	-2.82E+1	1.23E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.71E+1	7.96E-1	8.68E+1	1.45E+2	2.87E-1	6.26E+0	4.44E-2	-2.82E+1	1.23E+2
PENRE	MJ	3.75E+3	6.94E+1	1.94E+1	3.84E+3	2.12E+1	1.35E+2	1.19E+0	-2.10E+3	1.89E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.75E+3	6.94E+1	1.94E+1	3.84E+3	2.12E+1	1.35E+2	1.19E+0	-2.10E+3	1.89E+3
PET	MJ	3.80E+3	7.02E+1	1.06E+2	3.98E+3	2.15E+1	1.41E+2	1.24E+0	-2.13E+3	2.01E+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	1.16E+0	7.70E-3	2.24E-1	1.39E+0	2.26E-3	7.33E-2	1.39E-3	-5.79E-1	8.89E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.76E-4	1.60E-4	3.17E-5	6.67E-4	5.11E-5	2.07E-4	1.35E-6	-5.73E-4	3.53E-4
NHWD	kg	3.29E+0	3.93E+0	3.93E-2	7.26E+0	1.24E+0	6.23E+0	4.95E+0	-1.59E+0	1.81E+1
RWD	kg	3.16E-3	4.31E-4	7.58E-5	3.67E-3	1.36E-4	4.84E-4	7.35E-6	-1.09E-3	3.20E-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



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