

Environmental Profile

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

Ecochain v3.5.64



Product: 3015468 - SafeTech RCn WWP Pp 250x22.7 L=12
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]

Statement of Confidentiality

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	3.93E+2	1.07E+1	7.68E+0	4.11E+2	5.15E+0	1.67E+2	2.85E+0	-2.58E+2	3.29E+2
GWP-f	kg CO2 eq	3.91E+2	1.07E+1	6.35E+0	4.08E+2	5.15E+0	1.68E+2	2.85E+0	-2.57E+2	3.27E+2
GWP-b	kg CO2 eq	1.92E+0	4.53E-3	6.29E-1	2.55E+0	3.13E-3	-1.97E-1	2.14E-3	-9.76E-1	1.38E+0
GWP-luluc	kg CO2 eq	1.19E-1	4.08E-3	7.07E-1	8.30E-1	1.82E-3	2.89E-2	4.10E-5	-5.86E-2	8.02E-1
ODP	kg CFC11 eq	2.03E-5	2.35E-6	8.52E-7	2.35E-5	1.19E-6	3.76E-6	6.09E-8	-1.23E-5	1.62E-5
AP	mol H+ eq	1.47E+0	7.85E-2	3.72E-2	1.58E+0	2.93E-2	1.58E-1	1.45E-3	-7.13E-1	1.06E+0
EP-fw	kg P eq	6.52E-3	1.04E-4	1.43E-4	6.77E-3	4.24E-5	8.34E-4	1.89E-6	-3.21E-3	4.44E-3
EP-m	kg N eq	2.45E-1	2.56E-2	7.83E-3	2.78E-1	1.05E-2	4.60E-2	1.03E-3	-1.30E-1	2.05E-1
EP-T	mol N eq	2.73E+0	2.83E-1	7.84E-2	3.10E+0	1.16E-1	5.07E-1	5.90E-3	-1.45E+0	2.27E+0
POCP	kg NMVOC eq	1.30E+0	7.93E-2	2.26E-2	1.40E+0	3.31E-2	1.60E-1	2.31E-3	-6.76E-1	9.24E-1
ADP-mm	kg Sb eq	3.87E-3	2.60E-4	1.80E-4	4.31E-3	1.33E-4	6.26E-4	1.46E-6	-1.66E-3	3.41E-3
ADP-f	MJ	1.38E+4	1.60E+2	7.50E+1	1.41E+4	7.90E+1	5.02E+2	4.44E+0	-7.72E+3	6.93E+3
WDP	m3 depriv.	3.01E+2	5.56E-1	4.11E+1	3.43E+2	2.43E-1	9.86E+0	2.06E-2	-1.50E+2	2.03E+2
PM	disease inc.	1.37E-5	9.27E-7	3.40E-7	1.50E-5	4.65E-7	2.60E-6	3.05E-8	-5.64E-6	1.24E-5
IR	kBq U-235 eq	1.17E+1	6.73E-1	2.07E-1	1.26E+1	3.45E-1	1.51E+0	2.07E-2	-4.66E+0	9.78E+0
ETP-fw	CTUe	2.53E+3	1.41E+2	1.80E+2	2.85E+3	6.42E+1	5.69E+2	3.92E+0	-1.12E+3	2.37E+3
HTP-c	CTUh	1.04E-7	4.73E-9	6.66E-9	1.16E-7	2.28E-9	6.77E-8	1.08E-10	-5.33E-8	1.32E-7
HTP-nc	CTUh	2.47E-6	1.53E-7	1.70E-7	2.80E-6	7.65E-8	8.54E-7	2.49E-9	-1.19E-6	2.54E-6
SQP	Pt	5.30E+2	1.33E+2	7.44E+0	6.71E+2	6.76E+1	4.01E+2	1.14E+1	-2.45E+2	9.05E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.26E+2	1.96E+0	3.81E+2	6.08E+2	1.13E+0	2.48E+1	1.76E-1	-1.12E+2	5.23E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.26E+2	1.96E+0	3.81E+2	6.08E+2	1.13E+0	2.48E+1	1.76E-1	-1.12E+2	5.23E+2
PENRE	MJ	1.48E+4	1.70E+2	8.02E+1	1.51E+4	8.39E+1	5.35E+2	4.72E+0	-8.33E+3	7.38E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.48E+4	1.70E+2	8.02E+1	1.51E+4	8.39E+1	5.35E+2	4.72E+0	-8.33E+3	7.38E+3
PET	MJ	1.51E+4	1.72E+2	4.61E+2	1.57E+4	8.50E+1	5.59E+2	4.89E+0	-8.44E+3	7.90E+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	4.58E+0	1.90E-2	9.77E-1	5.58E+0	8.94E-3	2.90E-1	5.49E-3	-2.29E+0	3.59E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.88E-3	3.94E-4	1.26E-4	2.40E-3	2.02E-4	8.17E-4	5.34E-6	-2.27E-3	1.16E-3
NHWD	kg	1.30E+1	9.70E+0	1.57E-1	2.28E+1	4.90E+0	2.47E+1	1.96E+1	-6.29E+0	6.57E+1
RWD	kg	1.25E-2	1.06E-3	3.00E-4	1.39E-2	5.37E-4	1.91E-3	2.91E-5	-4.33E-3	1.20E-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



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