

Environmental Profile

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

Ecochain v3.5.64



Product: 3015480 - SafeTech RCn WWP Pp 315x18.7 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]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	4.25E+2	1.16E+1	9.21E+0	4.46E+2	5.56E+0	1.82E+2	3.08E+0	-2.79E+2	3.57E+2
GWP-f	kg CO2 eq	4.23E+2	1.16E+1	7.50E+0	4.42E+2	5.56E+0	1.82E+2	3.08E+0	-2.78E+2	3.55E+2
GWP-b	kg CO2 eq	2.05E+0	4.90E-3	8.03E-1	2.86E+0	3.38E-3	-2.10E-1	2.31E-3	-1.05E+0	1.60E+0
GWP-luluc	kg CO2 eq	1.29E-1	4.41E-3	9.07E-1	1.04E+0	1.97E-3	3.12E-2	4.43E-5	-6.33E-2	1.01E+0
ODP	kg CFC11 eq	2.20E-5	2.54E-6	9.57E-7	2.55E-5	1.28E-6	4.07E-6	6.57E-8	-1.34E-5	1.75E-5
AP	mol H+ eq	1.59E+0	8.48E-2	4.49E-2	1.72E+0	3.17E-2	1.71E-1	1.57E-3	-7.70E-1	1.15E+0
EP-fw	kg P eq	7.08E-3	1.13E-4	1.72E-4	7.37E-3	4.57E-5	9.01E-4	2.04E-6	-3.46E-3	4.85E-3
EP-m	kg N eq	2.65E-1	2.77E-2	9.01E-3	3.02E-1	1.13E-2	4.98E-2	1.11E-3	-1.41E-1	2.23E-1
EP-T	mol N eq	2.96E+0	3.06E-1	9.13E-2	3.36E+0	1.25E-1	5.48E-1	6.37E-3	-1.57E+0	2.47E+0
POCP	kg NMVOC eq	1.41E+0	8.56E-2	2.63E-2	1.52E+0	3.57E-2	1.73E-1	2.50E-3	-7.30E-1	1.00E+0
ADP-mm	kg Sb eq	4.19E-3	2.81E-4	2.30E-4	4.70E-3	1.44E-4	6.76E-4	1.57E-6	-1.80E-3	3.73E-3
ADP-f	MJ	1.50E+4	1.73E+2	8.75E+1	1.52E+4	8.53E+1	5.42E+2	4.80E+0	-8.34E+3	7.51E+3
WDP	m3 depriv.	3.26E+2	6.01E-1	5.23E+1	3.79E+2	2.62E-1	1.06E+1	2.22E-2	-1.62E+2	2.28E+2
PM	disease inc.	1.48E-5	1.00E-6	3.92E-7	1.62E-5	5.02E-7	2.81E-6	3.30E-8	-6.09E-6	1.35E-5
IR	kBq U-235 eq	1.27E+1	7.27E-1	2.28E-1	1.36E+1	3.73E-1	1.63E+0	2.24E-2	-5.03E+0	1.06E+1
ETP-fw	CTUe	2.75E+3	1.52E+2	2.21E+2	3.12E+3	6.93E+1	6.15E+2	4.23E+0	-1.21E+3	2.60E+3
HTP-c	CTUh	1.13E-7	5.11E-9	8.24E-9	1.26E-7	2.47E-9	7.32E-8	1.17E-10	-5.76E-8	1.44E-7
HTP-nc	CTUh	2.68E-6	1.65E-7	2.14E-7	3.06E-6	8.26E-8	9.23E-7	2.69E-9	-1.29E-6	2.78E-6
SQP	Pt	5.76E+2	1.44E+2	8.10E+0	7.28E+2	7.30E+1	4.33E+2	1.23E+1	-2.65E+2	9.81E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.45E+2	2.12E+0	4.89E+2	7.36E+2	1.22E+0	2.67E+1	1.90E-1	-1.21E+2	6.43E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.45E+2	2.12E+0	4.89E+2	7.36E+2	1.22E+0	2.67E+1	1.90E-1	-1.21E+2	6.43E+2
PENRE	MJ	1.60E+4	1.84E+2	9.35E+1	1.63E+4	9.06E+1	5.77E+2	5.09E+0	-9.00E+3	7.99E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.60E+4	1.84E+2	9.35E+1	1.63E+4	9.06E+1	5.77E+2	5.09E+0	-9.00E+3	7.99E+3
PET	MJ	1.63E+4	1.86E+2	5.83E+2	1.71E+4	9.18E+1	6.04E+2	5.28E+0	-9.12E+3	8.63E+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	4.96E+0	2.05E-2	1.24E+0	6.22E+0	9.66E-3	3.13E-1	5.93E-3	-2.48E+0	4.08E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.05E-3	4.25E-4	1.36E-4	2.61E-3	2.18E-4	8.83E-4	5.76E-6	-2.46E-3	1.26E-3
NHWD	kg	1.41E+1	1.05E+1	1.72E-1	2.48E+1	5.29E+0	2.67E+1	2.11E+1	-6.80E+0	7.10E+1
RWD	kg	1.36E-2	1.14E-3	3.24E-4	1.50E-2	5.80E-4	2.07E-3	3.14E-5	-4.67E-3	1.30E-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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