

Environmental Profile

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

Ecochain v3.5.64



Product: 3015438 - SafeTech RCn PotW Pp 280x25.4 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	4.94E+2	2.32E+1	1.07E+1	5.28E+2	6.48E+0	2.11E+2	3.59E+0	-3.25E+2	4.24E+2
GWP-f	kg CO2 eq	4.92E+2	2.32E+1	8.73E+0	5.24E+2	6.47E+0	2.11E+2	3.59E+0	-3.24E+2	4.21E+2
GWP-b	kg CO2 eq	2.41E+0	9.74E-3	9.36E-1	3.36E+0	3.93E-3	-2.50E-1	2.69E-3	-1.23E+0	1.89E+0
GWP-luluc	kg CO2 eq	1.49E-1	8.85E-3	1.06E+0	1.22E+0	2.29E-3	3.64E-2	5.15E-5	-7.37E-2	1.18E+0
ODP	kg CFC11 eq	2.55E-5	5.09E-6	1.12E-6	3.17E-5	1.49E-6	4.73E-6	7.65E-8	-1.55E-5	2.25E-5
AP	mol H+ eq	1.84E+0	1.72E-1	5.23E-2	2.06E+0	3.69E-2	1.99E-1	1.83E-3	-8.96E-1	1.41E+0
EP-fw	kg P eq	8.19E-3	2.25E-4	2.00E-4	8.62E-3	5.33E-5	1.05E-3	2.37E-6	-4.03E-3	5.69E-3
EP-m	kg N eq	3.07E-1	5.59E-2	1.05E-2	3.74E-1	1.32E-2	5.79E-2	1.29E-3	-1.64E-1	2.82E-1
EP-T	mol N eq	3.43E+0	6.18E-1	1.06E-1	4.16E+0	1.45E-1	6.37E-1	7.41E-3	-1.82E+0	3.13E+0
POCP	kg NMVOC eq	1.64E+0	1.73E-1	3.06E-2	1.84E+0	4.16E-2	2.01E-1	2.91E-3	-8.50E-1	1.24E+0
ADP-mm	kg Sb eq	4.79E-3	5.61E-4	2.68E-4	5.62E-3	1.68E-4	7.87E-4	1.83E-6	-2.09E-3	4.49E-3
ADP-f	MJ	1.74E+4	3.46E+2	1.02E+2	1.79E+4	9.94E+1	6.31E+2	5.59E+0	-9.71E+3	8.88E+3
WDP	m3 depriv.	3.79E+2	1.20E+0	6.09E+1	4.41E+2	3.05E-1	1.24E+1	2.56E-2	-1.89E+2	2.65E+2
PM	disease inc.	1.72E-5	2.00E-6	4.56E-7	1.97E-5	5.85E-7	3.27E-6	3.84E-8	-7.09E-6	1.65E-5
IR	kBq U-235 eq	1.47E+1	1.45E+0	2.66E-1	1.64E+1	4.34E-1	1.90E+0	2.60E-2	-5.86E+0	1.29E+1
ETP-fw	CTUe	3.17E+3	3.04E+2	2.57E+2	3.73E+3	8.07E+1	7.16E+2	4.93E+0	-1.41E+3	3.12E+3
HTP-c	CTUh	1.31E-7	1.02E-8	9.60E-9	1.51E-7	2.87E-9	8.50E-8	1.36E-10	-6.71E-8	1.72E-7
HTP-nc	CTUh	3.10E-6	3.29E-7	2.49E-7	3.68E-6	9.62E-8	1.07E-6	3.13E-9	-1.50E-6	3.35E-6
SQP	Pt	6.64E+2	2.87E+2	9.44E+0	9.60E+2	8.50E+1	5.04E+2	1.43E+1	-3.08E+2	1.26E+3
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.84E+2	4.22E+0	5.70E+2	8.57E+2	1.43E+0	3.11E+1	2.21E-1	-1.40E+2	7.50E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.84E+2	4.22E+0	5.70E+2	8.57E+2	1.43E+0	3.11E+1	2.21E-1	-1.40E+2	7.50E+2
PENRE	MJ	1.87E+4	3.68E+2	1.09E+2	1.91E+4	1.06E+2	6.72E+2	5.93E+0	-1.05E+4	9.45E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.87E+4	3.68E+2	1.09E+2	1.91E+4	1.06E+2	6.72E+2	5.93E+0	-1.05E+4	9.45E+3
PET	MJ	1.89E+4	3.72E+2	6.79E+2	2.00E+4	1.07E+2	7.03E+2	6.15E+0	-1.06E+4	1.02E+4
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	5.76E+0	4.09E-2	1.45E+0	7.24E+0	1.12E-2	3.65E-1	6.91E-3	-2.88E+0	4.74E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.35E-3	8.48E-4	1.58E-4	3.36E-3	2.54E-4	1.03E-3	6.71E-6	-2.85E-3	1.79E-3
NHWD	kg	1.62E+1	2.09E+1	2.00E-1	3.73E+1	6.16E+0	3.10E+1	2.46E+1	-7.91E+0	9.12E+1
RWD	kg	1.58E-2	2.28E-3	3.77E-4	1.84E-2	6.76E-4	2.41E-3	3.66E-5	-5.44E-3	1.61E-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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