

Environmental Profile

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

Ecochain v3.5.64



Product: 3053578 - SafeTech RCn PotW Pp 63x5.8 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	2.56E+1	1.07E+0	5.25E-1	2.72E+1	3.35E-1	1.09E+1	1.86E-1	-1.68E+1	2.18E+1
GWP-f	kg CO2 eq	2.55E+1	1.07E+0	4.30E-1	2.70E+1	3.35E-1	1.09E+1	1.86E-1	-1.67E+1	2.17E+1
GWP-b	kg CO2 eq	1.24E-1	4.95E-4	4.43E-2	1.69E-1	2.03E-4	-1.26E-2	1.39E-4	-6.35E-2	9.35E-2
GWP-luluc	kg CO2 eq	7.73E-3	3.93E-4	4.99E-2	5.81E-2	1.19E-4	1.88E-3	2.66E-6	-3.81E-3	5.63E-2
ODP	kg CFC11 eq	1.32E-6	2.37E-7	5.64E-8	1.61E-6	7.72E-8	2.45E-7	3.96E-9	-8.03E-7	1.13E-6
AP	mol H+ eq	9.53E-2	6.22E-3	2.55E-3	1.04E-1	1.91E-3	1.03E-2	9.44E-5	-4.64E-2	7.00E-2
EP-fw	kg P eq	4.24E-4	1.08E-5	9.77E-6	4.45E-4	2.76E-6	5.43E-5	1.23E-7	-2.09E-4	2.94E-4
EP-m	kg N eq	1.59E-2	2.19E-3	5.24E-4	1.86E-2	6.83E-4	3.00E-3	6.68E-5	-8.48E-3	1.39E-2
EP-T	mol N eq	1.78E-1	2.42E-2	5.28E-3	2.07E-1	7.52E-3	3.30E-2	3.83E-4	-9.43E-2	1.54E-1
POCP	kg NMVOC eq	8.48E-2	6.90E-3	1.52E-3	9.32E-2	2.15E-3	1.04E-2	1.50E-4	-4.40E-2	6.19E-2
ADP-mm	kg Sb eq	2.48E-4	2.72E-5	1.27E-5	2.88E-4	8.66E-6	4.07E-5	9.48E-8	-1.08E-4	2.29E-4
ADP-f	MJ	9.00E+2	1.62E+1	5.06E+0	9.22E+2	5.14E+0	3.26E+1	2.89E-1	-5.02E+2	4.58E+2
WDP	m3 depriv.	1.96E+1	5.78E-2	2.89E+0	2.26E+1	1.58E-2	6.41E-1	1.32E-3	-9.76E+0	1.35E+1
PM	disease inc.	8.92E-7	9.63E-8	2.28E-8	1.01E-6	3.02E-8	1.69E-7	1.99E-9	-3.67E-7	8.46E-7
IR	kBq U-235 eq	7.60E-1	6.77E-2	1.36E-2	8.41E-1	2.25E-2	9.83E-2	1.35E-3	-3.03E-1	6.60E-1
ETP-fw	CTUe	1.64E+2	1.44E+1	1.24E+1	1.91E+2	4.17E+0	3.70E+1	2.55E-1	-7.30E+1	1.59E+2
HTP-c	CTUh	6.77E-9	4.68E-10	4.62E-10	7.70E-9	1.49E-10	4.39E-9	7.02E-12	-3.47E-9	8.78E-9
HTP-nc	CTUh	1.60E-7	1.58E-8	1.19E-8	1.88E-7	4.98E-9	5.56E-8	1.62E-10	-7.76E-8	1.71E-7
SQP	Pt	3.44E+1	1.40E+1	4.86E-1	4.89E+1	4.40E+0	2.61E+1	7.42E-1	-1.59E+1	6.42E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.47E+1	2.02E-1	2.69E+1	4.18E+1	7.38E-2	1.61E+0	1.14E-2	-7.27E+0	3.62E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.47E+1	2.02E-1	2.69E+1	4.18E+1	7.38E-2	1.61E+0	1.14E-2	-7.27E+0	3.62E+1
PENRE	MJ	9.66E+2	1.72E+1	5.41E+0	9.88E+2	5.46E+0	3.48E+1	3.07E-1	-5.42E+2	4.87E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	9.66E+2	1.72E+1	5.41E+0	9.88E+2	5.46E+0	3.48E+1	3.07E-1	-5.42E+2	4.87E+2
PET	MJ	9.80E+2	1.74E+1	3.23E+1	1.03E+3	5.53E+0	3.64E+1	3.18E-1	-5.49E+2	5.23E+2
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	2.98E-1	1.97E-3	6.87E-2	3.69E-1	5.82E-4	1.89E-2	3.57E-4	-1.49E-1	2.40E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.22E-4	4.10E-5	8.16E-6	1.71E-4	1.31E-5	5.31E-5	3.47E-7	-1.48E-4	8.99E-5
NHWD	kg	8.41E-1	1.03E+0	1.03E-2	1.88E+0	3.19E-1	1.60E+0	1.27E+0	-4.09E-1	4.66E+0
RWD	kg	8.15E-4	1.06E-4	1.95E-5	9.41E-4	3.50E-5	1.25E-4	1.89E-6	-2.81E-4	8.21E-4
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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