

Environmental Profile

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

Ecochain v3.5.64



Product: 3053708 - SafeTech RCn PotW Pp 225x20.5 L=6 BC
Unit: 1 piece
Manufacturer: Wavin - DE - Westeregeln - verified
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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	1.60E+2	7.52E+0	3.18E+0	1.71E+2	2.10E+0	6.84E+1	1.16E+0	-1.05E+2	1.37E+2
GWP-f	kg CO2 eq	1.60E+2	7.52E+0	2.62E+0	1.70E+2	2.10E+0	6.84E+1	1.16E+0	-1.05E+2	1.36E+2
GWP-b	kg CO2 eq	7.82E-1	3.16E-3	2.63E-1	1.05E+0	1.28E-3	-8.00E-2	8.74E-4	-3.98E-1	5.72E-1
GWP-luluc	kg CO2 eq	4.84E-2	2.87E-3	2.95E-1	3.47E-1	7.43E-4	1.18E-2	1.67E-5	-2.39E-2	3.35E-1
ODP	kg CFC11 eq	8.27E-6	1.65E-6	3.49E-7	1.03E-5	4.84E-7	1.54E-6	2.48E-8	-5.04E-6	7.28E-6
AP	mol H+ eq	5.97E-1	5.58E-2	1.54E-2	6.68E-1	1.20E-2	6.46E-2	5.92E-4	-2.91E-1	4.55E-1
EP-fw	kg P eq	2.66E-3	7.30E-5	5.91E-5	2.79E-3	1.73E-5	3.40E-4	7.69E-7	-1.31E-3	1.84E-3
EP-m	kg N eq	9.98E-2	1.81E-2	3.22E-3	1.21E-1	4.28E-3	1.88E-2	4.19E-4	-5.32E-2	9.15E-2
EP-T	mol N eq	1.11E+0	2.00E-1	3.23E-2	1.35E+0	4.72E-2	2.07E-1	2.41E-3	-5.91E-1	1.01E+0
POCP	kg NMVOC eq	5.31E-1	5.61E-2	9.30E-3	5.97E-1	1.35E-2	6.54E-2	9.43E-4	-2.76E-1	4.01E-1
ADP-mm	kg Sb eq	1.55E-3	1.82E-4	7.52E-5	1.81E-3	5.43E-5	2.55E-4	5.94E-7	-6.79E-4	1.44E-3
ADP-f	MJ	5.65E+3	1.12E+2	3.09E+1	5.79E+3	3.22E+1	2.05E+2	1.81E+0	-3.15E+3	2.88E+3
WDP	m3 depriv.	1.23E+2	3.89E-1	1.71E+1	1.41E+2	9.90E-2	4.02E+0	8.30E-3	-6.12E+1	8.35E+1
PM	disease inc.	5.59E-6	6.48E-7	1.40E-7	6.38E-6	1.90E-7	1.06E-6	1.25E-8	-2.30E-6	5.34E-6
IR	kBq U-235 eq	4.77E+0	4.71E-1	8.48E-2	5.32E+0	1.41E-1	6.17E-1	8.45E-3	-1.90E+0	4.19E+0
ETP-fw	CTUe	1.03E+3	9.87E+1	7.45E+1	1.20E+3	2.62E+1	2.32E+2	1.60E+0	-4.58E+2	1.00E+3
HTP-c	CTUh	4.24E-8	3.32E-9	2.77E-9	4.85E-8	9.32E-10	2.76E-8	4.40E-11	-2.18E-8	5.53E-8
HTP-nc	CTUh	1.01E-6	1.07E-7	7.09E-8	1.18E-6	3.12E-8	3.48E-7	1.02E-9	-4.87E-7	1.08E-6
SQP	Pt	2.15E+2	9.32E+1	3.04E+0	3.12E+2	2.76E+1	1.64E+2	4.65E+0	-1.00E+2	4.07E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	9.20E+1	1.37E+0	1.59E+2	2.52E+2	4.63E-1	1.01E+1	7.18E-2	-4.56E+1	2.18E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	9.20E+1	1.37E+0	1.59E+2	2.52E+2	4.63E-1	1.01E+1	7.18E-2	-4.56E+1	2.18E+2
PENRE	MJ	6.06E+3	1.19E+2	3.30E+1	6.21E+3	3.42E+1	2.18E+2	1.92E+0	-3.40E+3	3.06E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.06E+3	1.19E+2	3.30E+1	6.21E+3	3.42E+1	2.18E+2	1.92E+0	-3.40E+3	3.06E+3
PET	MJ	6.15E+3	1.21E+2	1.92E+2	6.46E+3	3.47E+1	2.28E+2	2.00E+0	-3.44E+3	3.28E+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	1.87E+0	1.33E-2	4.07E-1	2.29E+0	3.65E-3	1.18E-1	2.24E-3	-9.35E-1	1.48E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	7.63E-4	2.75E-4	5.12E-5	1.09E-3	8.25E-5	3.33E-4	2.18E-6	-9.26E-4	5.82E-4
NHWD	kg	5.27E+0	6.77E+0	6.41E-2	1.21E+1	2.00E+0	1.01E+1	7.99E+0	-2.57E+0	2.96E+1
RWD	kg	5.11E-3	7.40E-4	1.22E-4	5.97E-3	2.19E-4	7.81E-4	1.19E-5	-1.77E-3	5.22E-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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