

Environmental Profile

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

Ecochain v3.5.64



Product: 3072739 - SafeTech RCn PotW Pp 75x6.8 L=100 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	2.97E+2	1.40E+1	6.11E+0	3.17E+2	3.90E+0	1.27E+2	2.16E+0	-1.95E+2	2.55E+2
GWP-f	kg CO2 eq	2.96E+2	1.39E+1	5.01E+0	3.15E+2	3.90E+0	1.27E+2	2.16E+0	-1.95E+2	2.53E+2
GWP-b	kg CO2 eq	1.46E+0	5.86E-3	5.16E-1	1.98E+0	2.37E-3	-1.56E-1	1.62E-3	-7.38E-1	1.09E+0
GWP-luluc	kg CO2 eq	8.98E-2	5.32E-3	5.81E-1	6.76E-1	1.38E-3	2.19E-2	3.10E-5	-4.43E-2	6.55E-1
ODP	kg CFC11 eq	1.53E-5	3.06E-6	6.57E-7	1.91E-5	8.98E-7	2.85E-6	4.61E-8	-9.34E-6	1.35E-5
AP	mol H+ eq	1.11E+0	1.04E-1	2.97E-2	1.24E+0	2.22E-2	1.20E-1	1.10E-3	-5.39E-1	8.44E-1
EP-fw	kg P eq	4.93E-3	1.35E-4	1.14E-4	5.18E-3	3.21E-5	6.31E-4	1.43E-6	-2.43E-3	3.42E-3
EP-m	kg N eq	1.85E-1	3.36E-2	6.10E-3	2.25E-1	7.94E-3	3.48E-2	7.77E-4	-9.86E-2	1.70E-1
EP-T	mol N eq	2.07E+0	3.72E-1	6.15E-2	2.50E+0	8.75E-2	3.83E-1	4.46E-3	-1.10E+0	1.88E+0
POCP	kg NMVOC eq	9.85E-1	1.04E-1	1.77E-2	1.11E+0	2.50E-2	1.21E-1	1.75E-3	-5.11E-1	7.44E-1
ADP-mm	kg Sb eq	2.88E-3	3.38E-4	1.48E-4	3.37E-3	1.01E-4	4.74E-4	1.10E-6	-1.26E-3	2.69E-3
ADP-f	MJ	1.05E+4	2.08E+2	5.88E+1	1.07E+4	5.98E+1	3.80E+2	3.36E+0	-5.84E+3	5.34E+3
WDP	m3 depriv.	2.28E+2	7.21E-1	3.36E+1	2.62E+2	1.84E-1	7.46E+0	1.54E-2	-1.13E+2	1.57E+2
PM	disease inc.	1.04E-5	1.20E-6	2.65E-7	1.18E-5	3.52E-7	1.97E-6	2.31E-8	-4.26E-6	9.91E-6
IR	kBq U-235 eq	8.84E+0	8.74E-1	1.58E-1	9.87E+0	2.61E-1	1.14E+0	1.57E-2	-3.53E+0	7.77E+0
ETP-fw	CTUe	1.91E+3	1.83E+2	1.45E+2	2.23E+3	4.86E+1	4.31E+2	2.96E+0	-8.49E+2	1.87E+3
HTP-c	CTUh	7.87E-8	6.16E-9	5.38E-9	9.02E-8	1.73E-9	5.11E-8	8.17E-11	-4.04E-8	1.03E-7
HTP-nc	CTUh	1.86E-6	1.98E-7	1.38E-7	2.20E-6	5.79E-8	6.46E-7	1.88E-9	-9.03E-7	2.00E-6
SQP	Pt	3.99E+2	1.73E+2	5.65E+0	5.77E+2	5.12E+1	3.03E+2	8.63E+0	-1.85E+2	7.55E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.71E+2	2.54E+0	3.13E+2	4.86E+2	8.58E-1	1.87E+1	1.33E-1	-8.45E+1	4.22E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.71E+2	2.54E+0	3.13E+2	4.86E+2	8.58E-1	1.87E+1	1.33E-1	-8.45E+1	4.22E+2
PENRE	MJ	1.12E+4	2.21E+2	6.29E+1	1.15E+4	6.35E+1	4.04E+2	3.57E+0	-6.30E+3	5.68E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.12E+4	2.21E+2	6.29E+1	1.15E+4	6.35E+1	4.04E+2	3.57E+0	-6.30E+3	5.68E+3
PET	MJ	1.14E+4	2.24E+2	3.76E+2	1.20E+4	6.43E+1	4.23E+2	3.70E+0	-6.39E+3	6.11E+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	3.46E+0	2.46E-2	7.99E-1	4.29E+0	6.77E-3	2.19E-1	4.16E-3	-1.73E+0	2.78E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.42E-3	5.10E-4	9.50E-5	2.02E-3	1.53E-4	6.18E-4	4.04E-6	-1.72E-3	1.08E-3
NHWD	kg	9.78E+0	1.26E+1	1.19E-1	2.25E+1	3.71E+0	1.87E+1	1.48E+1	-4.76E+0	5.49E+1
RWD	kg	9.48E-3	1.37E-3	2.27E-4	1.11E-2	4.07E-4	1.45E-3	2.20E-5	-3.27E-3	9.68E-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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