

Environmental Profile

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

Ecochain v3.5.64



Product: 3062836 - X-Stream PP Drain Pipe BK 100 L=6 S/PL
Unit: 1 Piece
Manufacturer: Wavin - SE - Eskilstuna

Wavin X-Stream is a new generation of double-walled pipes and fittings made of polypropylene. The system is suitable for pressureless transport of rainwater and wastewater.

LCA standard: EN15804+A2 (2019)
Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified: Yes
Issue date: 20-06-2022
End of validity: 20-06-2027
Verifier: Harry van Ewijk - SGS Search



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 - SE - Eskilstuna (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]

Statement of Confidentiality

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	7.93E+0	7.87E-1	2.77E-1	8.99E+0	1.07E-1	3.45E+0	5.02E-2	-4.95E+0	7.66E+0
GWP-f	kg CO2 eq	8.13E+0	7.86E-1	2.01E-1	9.12E+0	1.06E-1	3.21E+0	5.02E-2	-4.93E+0	7.56E+0
GWP-b	kg CO2 eq	-2.04E-1	3.57E-4	5.28E-2	-1.51E-1	6.47E-5	2.38E-1	4.37E-5	-1.73E-2	7.06E-2
GWP-luluc	kg CO2 eq	2.93E-3	2.90E-4	2.33E-2	2.65E-2	3.77E-5	6.92E-4	8.53E-7	-9.56E-4	2.63E-2
ODP	kg CFC11 eq	1.47E-7	1.73E-7	2.27E-8	3.43E-7	2.45E-8	1.48E-7	1.26E-9	-1.82E-7	3.35E-7
AP	mol H+ eq	2.89E-2	4.78E-3	1.70E-3	3.54E-2	6.07E-4	3.88E-3	3.00E-5	-1.39E-2	2.60E-2
EP-fw	kg P eq	1.19E-4	7.88E-6	3.70E-6	1.30E-4	8.76E-7	2.27E-5	3.91E-8	-5.44E-5	9.97E-5
EP-m	kg N eq	4.82E-3	1.66E-3	5.04E-4	6.99E-3	2.17E-4	1.03E-3	1.96E-5	-2.45E-3	5.80E-3
EP-T	mol N eq	5.44E-2	1.83E-2	5.52E-3	7.82E-2	2.39E-3	1.16E-2	1.22E-4	-2.71E-2	6.52E-2
POCP	kg NMVOC eq	2.52E-2	5.20E-3	1.53E-3	3.19E-2	6.84E-4	3.62E-3	4.58E-5	-1.25E-2	2.38E-2
ADP-mm	kg Sb eq	1.09E-4	1.98E-5	6.04E-6	1.35E-4	2.75E-6	1.56E-5	3.02E-8	-3.27E-5	1.20E-4
ADP-f	MJ	2.90E+2	1.18E+1	1.99E+0	3.04E+2	1.63E+0	1.36E+1	9.19E-2	-1.56E+2	1.63E+2
WDP	m3 depriv.	5.77E+0	4.21E-2	1.28E+0	7.10E+0	5.02E-3	4.38E-1	4.59E-4	-2.70E+0	4.84E+0
PM	disease inc.	2.56E-7	7.01E-8	2.87E-8	3.54E-7	9.61E-9	5.71E-8	6.32E-10	-1.16E-7	3.06E-7
IR	kBq U-235 eq	1.48E-1	4.96E-2	5.93E-3	2.03E-1	7.14E-3	3.85E-2	4.26E-4	-7.23E-2	1.77E-1
ETP-fw	CTUe	4.27E+1	1.05E+1	5.56E+0	5.88E+1	1.33E+0	1.36E+1	7.69E-2	-1.92E+1	5.45E+1
HTP-c	CTUh	1.92E-9	3.44E-10	2.19E-10	2.48E-9	4.72E-11	1.51E-9	2.24E-12	-8.22E-10	3.22E-9
HTP-nc	CTUh	5.20E-8	1.15E-8	5.98E-9	6.95E-8	1.58E-9	1.98E-8	4.95E-11	-2.33E-8	6.77E-8
SQP	Pt	3.00E+1	1.02E+1	2.62E-1	4.04E+1	1.40E+0	8.52E+0	2.36E-1	-4.18E+0	4.64E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.45E+0	1.48E-1	1.26E+1	2.02E+1	2.35E-2	6.76E-1	3.56E-3	-1.93E+0	1.89E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	7.45E+0	1.48E-1	1.26E+1	2.02E+1	2.35E-2	6.76E-1	3.56E-3	-1.93E+0	1.89E+1
PENRE	MJ	3.11E+2	1.26E+1	2.12E+0	3.26E+2	1.74E+0	1.45E+1	9.75E-2	-1.68E+2	1.74E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.11E+2	1.26E+1	2.12E+0	3.26E+2	1.74E+0	1.45E+1	9.75E-2	-1.68E+2	1.74E+2
PET	MJ	3.19E+2	1.27E+1	1.47E+1	3.46E+2	1.76E+0	1.52E+1	1.01E-1	-1.70E+2	1.93E+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	8.70E-2	1.43E-3	3.05E-2	1.19E-1	1.85E-4	8.55E-3	1.13E-4	-4.04E-2	8.74E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.50E-5	2.98E-5	3.04E-6	6.79E-5	4.18E-6	1.93E-5	1.11E-7	-3.58E-5	5.56E-5
NHWD	kg	3.17E-1	7.44E-1	9.30E-3	1.07E+0	1.01E-1	5.10E-1	4.05E-1	-1.20E-1	1.97E+0
RWD	kg	1.29E-4	7.78E-5	8.43E-6	2.15E-4	1.11E-5	4.58E-5	6.00E-7	-6.50E-5	2.07E-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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