

Environmental Profile

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

Ecochain v3.5.64



Product: 3062823 - X-Stream PP Pipe BK 500 SN8 L=3 S/SP
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]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	9.64E+1	7.87E+0	2.85E+0	1.07E+2	1.17E+0	3.39E+1	5.51E-1	-5.43E+1	8.85E+1
GWP-f	kg CO2 eq	9.63E+1	7.87E+0	2.07E+0	1.06E+2	1.17E+0	3.40E+1	5.51E-1	-5.41E+1	8.78E+1
GWP-b	kg CO2 eq	1.05E-1	3.58E-3	5.44E-1	6.53E-1	7.10E-4	-4.69E-2	4.80E-4	-1.90E-1	4.17E-1
GWP-luluc	kg CO2 eq	3.18E-2	2.90E-3	2.40E-1	2.75E-1	4.14E-4	6.56E-3	9.35E-6	-1.05E-2	2.72E-1
ODP	kg CFC11 eq	2.14E-6	1.73E-6	2.34E-7	4.11E-6	2.69E-7	8.52E-7	1.38E-8	-2.00E-6	3.25E-6
AP	mol H+ eq	3.54E-1	4.78E-2	1.75E-2	4.19E-1	6.66E-3	3.58E-2	3.29E-4	-1.52E-1	3.10E-1
EP-fw	kg P eq	1.66E-3	7.88E-5	3.82E-5	1.78E-3	9.62E-6	1.89E-4	4.29E-7	-5.97E-4	1.38E-3
EP-m	kg N eq	5.92E-2	1.66E-2	5.19E-3	8.09E-2	2.38E-3	1.04E-2	2.15E-4	-2.69E-2	6.71E-2
EP-T	mol N eq	6.67E-1	1.83E-1	5.69E-2	9.07E-1	2.63E-2	1.15E-1	1.34E-3	-2.98E-1	7.51E-1
POCP	kg NMVOC eq	2.96E-1	5.20E-2	1.58E-2	3.64E-1	7.50E-3	3.63E-2	5.02E-4	-1.37E-1	2.71E-1
ADP-mm	kg Sb eq	1.21E-3	1.98E-4	6.22E-5	1.47E-3	3.02E-5	1.42E-4	3.32E-7	-3.59E-4	1.29E-3
ADP-f	MJ	3.28E+3	1.18E+2	2.05E+1	3.42E+3	1.79E+1	1.14E+2	1.01E+0	-1.71E+3	1.85E+3
WDP	m3 depriv.	6.23E+1	4.21E-1	1.32E+1	7.59E+1	5.51E-2	2.23E+0	5.00E-3	-2.96E+1	4.86E+1
PM	disease inc.	3.02E-6	7.02E-7	2.95E-7	4.02E-6	1.06E-7	5.91E-7	6.93E-9	-1.27E-6	3.45E-6
IR	kBq U-235 eq	1.94E+0	4.96E-1	6.11E-2	2.49E+0	7.84E-2	3.43E-1	4.68E-3	-7.93E-1	2.13E+0
ETP-fw	CTUe	6.22E+2	1.05E+2	5.73E+1	7.85E+2	1.46E+1	1.28E+2	8.44E-1	-2.11E+2	7.18E+2
HTP-c	CTUh	2.23E-8	3.44E-9	2.26E-9	2.80E-8	5.18E-10	1.54E-8	2.46E-11	-9.02E-9	3.50E-8
HTP-nc	CTUh	6.32E-7	1.15E-7	6.17E-8	8.08E-7	1.74E-8	1.91E-7	5.43E-10	-2.56E-7	7.62E-7
SQP	Pt	1.53E+2	1.02E+2	2.70E+0	2.58E+2	1.53E+1	9.09E+1	2.59E+0	-4.58E+1	3.21E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.62E+1	1.48E+0	1.30E+2	1.87E+2	2.57E-1	5.61E+0	3.91E-2	-2.12E+1	1.72E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.62E+1	1.48E+0	1.30E+2	1.87E+2	2.57E-1	5.61E+0	3.91E-2	-2.12E+1	1.72E+2
PENRE	MJ	3.52E+3	1.26E+2	2.18E+1	3.67E+3	1.90E+1	1.21E+2	1.07E+0	-1.84E+3	1.97E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.52E+3	1.26E+2	2.18E+1	3.67E+3	1.90E+1	1.21E+2	1.07E+0	-1.84E+3	1.97E+3
PET	MJ	3.58E+3	1.27E+2	1.51E+2	3.86E+3	1.93E+1	1.27E+2	1.11E+0	-1.86E+3	2.14E+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	9.95E-1	1.43E-2	3.14E-1	1.32E+0	2.03E-3	6.57E-2	1.24E-3	-4.43E-1	9.49E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.89E-4	2.98E-4	3.13E-5	9.19E-4	4.59E-5	1.85E-4	1.21E-6	-3.93E-4	7.58E-4
NHWD	kg	4.15E+0	7.45E+0	9.59E-2	1.17E+1	1.11E+0	5.58E+0	4.44E+0	-1.32E+0	2.15E+1
RWD	kg	1.69E-3	7.78E-4	8.69E-5	2.55E-3	1.22E-4	4.34E-4	6.59E-6	-7.14E-4	2.40E-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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