

Environmental Profile

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

Ecochain v3.5.64



Product: 3062821 - X-Stream PP Pipe BK 300 SN8 L=6 S/SP
 Unit: 1 Piece
 Manufacturer: Wavin - SE - Eskilstuna

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



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.

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

A1 Raw material supply A2 Transport A3 Manufacturing

Construction process stage

A4 Transport gate to site
 A5 Assembly / Construction installation process

Use stage

B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment
 B6 Operational energy use B7 Operational water use

End-of-Life stage

C1 De-construction demolition C2 Transport C3 Waste processing
 C4 Disposal

Benefits and loads beyond the system boundaries

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	6.19E+1	5.61E+0	2.03E+0	6.95E+1	7.87E-1	2.28E+1	3.71E-1	-3.65E+1	5.70E+1
GWP-f	kg CO2 eq	6.17E+1	5.61E+0	1.47E+0	6.88E+1	7.86E-1	2.28E+1	3.71E-1	-3.64E+1	5.64E+1
GWP-b	kg CO2 eq	1.92E-1	2.55E-3	3.87E-1	5.81E-1	4.77E-4	-3.15E-2	3.23E-4	-1.28E-1	4.23E-1
GWP-luluc	kg CO2 eq	1.77E-2	2.07E-3	1.71E-1	1.91E-1	2.78E-4	4.41E-3	6.29E-6	-7.05E-3	1.88E-1
ODP	kg CFC11 eq	1.20E-6	1.24E-6	1.66E-7	2.60E-6	1.81E-7	5.73E-7	9.29E-9	-1.34E-6	2.02E-6
AP	mol H+ eq	2.22E-1	3.41E-2	1.24E-2	2.68E-1	4.48E-3	2.41E-2	2.22E-4	-1.02E-1	1.95E-1
EP-fw	kg P eq	9.63E-4	5.62E-5	2.71E-5	1.05E-3	6.47E-6	1.27E-4	2.89E-7	-4.01E-4	7.79E-4
EP-m	kg N eq	3.69E-2	1.18E-2	3.69E-3	5.24E-2	1.60E-3	7.00E-3	1.44E-4	-1.81E-2	4.31E-2
EP-T	mol N eq	4.16E-1	1.30E-1	4.05E-2	5.87E-1	1.77E-2	7.71E-2	9.00E-4	-2.00E-1	4.82E-1
POCP	kg NMVOC eq	1.90E-1	3.71E-2	1.12E-2	2.38E-1	5.05E-3	2.44E-2	3.38E-4	-9.24E-2	1.75E-1
ADP-mm	kg Sb eq	8.05E-4	1.41E-4	4.42E-5	9.91E-4	2.03E-5	9.55E-5	2.23E-7	-2.42E-4	8.65E-4
ADP-f	MJ	2.16E+3	8.44E+1	1.46E+1	2.26E+3	1.21E+1	7.65E+1	6.78E-1	-1.15E+3	1.20E+3
WDP	m3 depriv.	4.20E+1	3.00E-1	9.41E+0	5.17E+1	3.70E-2	1.50E+0	3.38E-3	-1.99E+1	3.33E+1
PM	disease inc.	1.92E-6	5.00E-7	2.10E-7	2.63E-6	7.09E-8	3.97E-7	4.66E-9	-8.56E-7	2.24E-6
IR	kBq U-235 eq	1.16E+0	3.54E-1	4.34E-2	1.56E+0	5.27E-2	2.31E-1	3.15E-3	-5.33E-1	1.31E+0
ETP-fw	CTUe	3.51E+2	7.51E+1	4.07E+1	4.67E+2	9.80E+0	8.63E+1	5.68E-1	-1.42E+2	4.22E+2
HTP-c	CTUh	1.40E-8	2.45E-9	1.61E-9	1.81E-8	3.49E-10	1.04E-8	1.65E-11	-6.07E-9	2.28E-8
HTP-nc	CTUh	3.96E-7	8.20E-8	4.38E-8	5.21E-7	1.17E-8	1.29E-7	3.65E-10	-1.72E-7	4.90E-7
SQP	Pt	8.39E+1	7.27E+1	1.92E+0	1.59E+2	1.03E+1	6.12E+1	1.74E+0	-3.08E+1	2.01E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.32E+1	1.05E+0	9.21E+1	1.26E+2	1.73E-1	3.78E+0	2.63E-2	-1.43E+1	1.16E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.32E+1	1.05E+0	9.21E+1	1.26E+2	1.73E-1	3.78E+0	2.63E-2	-1.43E+1	1.16E+2
PENRE	MJ	2.32E+3	8.97E+1	1.55E+1	2.43E+3	1.28E+1	8.15E+1	7.20E-1	-1.24E+3	1.28E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.32E+3	8.97E+1	1.55E+1	2.43E+3	1.28E+1	8.15E+1	7.20E-1	-1.24E+3	1.28E+3
PET	MJ	2.36E+3	9.07E+1	1.08E+2	2.55E+3	1.30E+1	8.53E+1	7.46E-1	-1.25E+3	1.40E+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	6.44E-1	1.02E-2	2.24E-1	8.78E-1	1.37E-3	4.42E-2	8.36E-4	-2.98E-1	6.26E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.05E-4	2.13E-4	2.22E-5	5.40E-4	3.09E-5	1.24E-4	8.17E-7	-2.64E-4	4.32E-4
NHWD	kg	2.45E+0	5.31E+0	6.82E-2	7.83E+0	7.48E-1	3.75E+0	2.99E+0	-8.85E-1	1.44E+1
RWD	kg	1.01E-3	5.55E-4	6.18E-5	1.63E-3	8.20E-5	2.92E-4	4.43E-6	-4.80E-4	1.53E-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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