

Environmental Profile

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

Ecochain v3.5.64



Product: 3065889 - X-Stream PP Pipe BK 250 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	4.95E+1	4.54E+0	1.63E+0	5.57E+1	6.33E-1	1.83E+1	2.98E-1	-2.94E+1	4.56E+1
GWP-f	kg CO2 eq	4.93E+1	4.54E+0	1.18E+0	5.51E+1	6.32E-1	1.84E+1	2.98E-1	-2.93E+1	4.51E+1
GWP-b	kg CO2 eq	1.66E-1	2.06E-3	3.11E-1	4.79E-1	3.84E-4	-2.54E-2	2.60E-4	-1.03E-1	3.51E-1
GWP-luluc	kg CO2 eq	1.39E-2	1.68E-3	1.38E-1	1.53E-1	2.24E-4	3.55E-3	5.06E-6	-5.67E-3	1.51E-1
ODP	kg CFC11 eq	9.43E-7	1.00E-6	1.34E-7	2.08E-6	1.46E-7	4.61E-7	7.47E-9	-1.08E-6	1.61E-6
AP	mol H+ eq	1.77E-1	2.76E-2	1.00E-2	2.15E-1	3.60E-3	1.94E-2	1.78E-4	-8.24E-2	1.55E-1
EP-fw	kg P eq	7.61E-4	4.55E-5	2.18E-5	8.28E-4	5.20E-6	1.02E-4	2.32E-7	-3.23E-4	6.13E-4
EP-m	kg N eq	2.94E-2	9.57E-3	2.97E-3	4.19E-2	1.29E-3	5.63E-3	1.16E-4	-1.45E-2	3.44E-2
EP-T	mol N eq	3.32E-1	1.06E-1	3.26E-2	4.70E-1	1.42E-2	6.20E-2	7.24E-4	-1.61E-1	3.86E-1
POCP	kg NMVOC eq	1.52E-1	3.00E-2	9.05E-3	1.91E-1	4.06E-3	1.96E-2	2.72E-4	-7.44E-2	1.40E-1
ADP-mm	kg Sb eq	6.46E-4	1.14E-4	3.56E-5	7.96E-4	1.64E-5	7.68E-5	1.80E-7	-1.94E-4	6.95E-4
ADP-f	MJ	1.74E+3	6.84E+1	1.18E+1	1.82E+3	9.71E+0	6.16E+1	5.46E-1	-9.25E+2	9.64E+2
WDP	m3 depriv.	3.38E+1	2.43E-1	7.57E+0	4.16E+1	2.98E-2	1.21E+0	2.72E-3	-1.60E+1	2.68E+1
PM	disease inc.	1.53E-6	4.05E-7	1.69E-7	2.11E-6	5.71E-8	3.19E-7	3.75E-9	-6.89E-7	1.80E-6
IR	kBq U-235 eq	9.24E-1	2.87E-1	3.50E-2	1.25E+0	4.24E-2	1.85E-1	2.53E-3	-4.29E-1	1.05E+0
ETP-fw	CTUe	2.76E+2	6.08E+1	3.28E+1	3.70E+2	7.88E+0	6.94E+1	4.57E-1	-1.14E+2	3.33E+2
HTP-c	CTUh	1.12E-8	1.98E-9	1.29E-9	1.45E-8	2.80E-10	8.36E-9	1.33E-11	-4.88E-9	1.82E-8
HTP-nc	CTUh	3.16E-7	6.64E-8	3.53E-8	4.17E-7	9.39E-9	1.03E-7	2.94E-10	-1.38E-7	3.92E-7
SQP	Pt	6.57E+1	5.89E+1	1.55E+0	1.26E+2	8.30E+0	4.92E+1	1.40E+0	-2.48E+1	1.60E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.63E+1	8.52E-1	7.41E+1	1.01E+2	1.39E-1	3.04E+0	2.11E-2	-1.15E+1	9.30E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.63E+1	8.52E-1	7.41E+1	1.01E+2	1.39E-1	3.04E+0	2.11E-2	-1.15E+1	9.30E+1
PENRE	MJ	1.86E+3	7.26E+1	1.25E+1	1.95E+3	1.03E+1	6.56E+1	5.79E-1	-9.97E+2	1.03E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.86E+3	7.26E+1	1.25E+1	1.95E+3	1.03E+1	6.56E+1	5.79E-1	-9.97E+2	1.03E+3
PET	MJ	1.89E+3	7.34E+1	8.66E+1	2.05E+3	1.04E+1	6.86E+1	6.00E-1	-1.01E+3	1.12E+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	5.16E-1	8.28E-3	1.80E-1	7.04E-1	1.10E-3	3.55E-2	6.73E-4	-2.40E-1	5.02E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.37E-4	1.72E-4	1.79E-5	4.27E-4	2.48E-5	1.00E-4	6.57E-7	-2.12E-4	3.40E-4
NHWD	kg	1.94E+0	4.30E+0	5.49E-2	6.29E+0	6.02E-1	3.02E+0	2.40E+0	-7.12E-1	1.16E+1
RWD	kg	8.01E-4	4.49E-4	4.97E-5	1.30E-3	6.60E-5	2.35E-4	3.56E-6	-3.86E-4	1.22E-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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