

# Environmental Profile

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

Ecochain v3.5.64



Product: 3062824 - X-Stream PP Pipe BK 500 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]

## 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	1.77E+2	1.57E+1	5.68E+0	1.99E+2	2.23E+0	6.47E+1	1.05E+0	-1.04E+2	1.63E+2
GWP-f	kg CO2 eq	1.77E+2	1.57E+1	4.11E+0	1.97E+2	2.23E+0	6.48E+1	1.05E+0	-1.03E+2	1.61E+2
GWP-b	kg CO2 eq	4.72E-1	7.14E-3	1.08E+0	1.56E+0	1.35E-3	-8.94E-2	9.16E-4	-3.62E-1	1.11E+0
GWP-luluc	kg CO2 eq	5.24E-2	5.80E-3	4.78E-1	5.37E-1	7.89E-4	1.25E-2	1.78E-5	-2.00E-2	5.30E-1
ODP	kg CFC11 eq	3.55E-6	3.47E-6	4.66E-7	7.48E-6	5.14E-7	1.63E-6	2.64E-8	-3.81E-6	5.83E-6
AP	mol H+ eq	6.39E-1	9.56E-2	3.48E-2	7.69E-1	1.27E-2	6.84E-2	6.28E-4	-2.91E-1	5.60E-1
EP-fw	kg P eq	2.82E-3	1.58E-4	7.59E-5	3.06E-3	1.83E-5	3.61E-4	8.19E-7	-1.14E-3	2.30E-3
EP-m	kg N eq	1.06E-1	3.31E-2	1.03E-2	1.50E-1	4.54E-3	1.99E-2	4.10E-4	-5.13E-2	1.23E-1
EP-T	mol N eq	1.20E+0	3.65E-1	1.13E-1	1.68E+0	5.01E-2	2.19E-1	2.55E-3	-5.68E-1	1.38E+0
POCP	kg NMVOC eq	5.44E-1	1.04E-1	3.15E-2	6.79E-1	1.43E-2	6.92E-2	9.58E-4	-2.62E-1	5.01E-1
ADP-mm	kg Sb eq	2.29E-3	3.95E-4	1.24E-4	2.81E-3	5.77E-5	2.71E-4	6.33E-7	-6.85E-4	2.45E-3
ADP-f	MJ	6.17E+3	2.37E+2	4.09E+1	6.44E+3	3.42E+1	2.17E+2	1.92E+0	-3.26E+3	3.44E+3
WDP	m3 depriv.	1.19E+2	8.42E-1	2.63E+1	1.46E+2	1.05E-1	4.26E+0	9.57E-3	-5.65E+1	9.40E+1
PM	disease inc.	5.51E-6	1.40E-6	5.88E-7	7.50E-6	2.01E-7	1.13E-6	1.32E-8	-2.43E-6	6.41E-6
IR	kBq U-235 eq	3.39E+0	9.92E-1	1.22E-1	4.50E+0	1.50E-1	6.54E-1	8.92E-3	-1.51E+0	3.80E+0
ETP-fw	CTUe	1.04E+3	2.11E+2	1.14E+2	1.36E+3	2.78E+1	2.45E+2	1.61E+0	-4.03E+2	1.23E+3
HTP-c	CTUh	4.03E-8	6.87E-9	4.50E-9	5.17E-8	9.89E-10	2.95E-8	4.69E-11	-1.72E-8	6.50E-8
HTP-nc	CTUh	1.14E-6	2.30E-7	1.23E-7	1.49E-6	3.31E-8	3.65E-7	1.04E-9	-4.88E-7	1.40E-6
SQP	Pt	2.49E+2	2.04E+2	5.38E+0	4.58E+2	2.93E+1	1.73E+2	4.94E+0	-8.74E+1	5.79E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	9.70E+1	2.95E+0	2.58E+2	3.58E+2	4.91E-1	1.07E+1	7.46E-2	-4.05E+1	3.29E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	9.70E+1	2.95E+0	2.58E+2	3.58E+2	4.91E-1	1.07E+1	7.46E-2	-4.05E+1	3.29E+2
PENRE	MJ	6.62E+3	2.51E+2	4.34E+1	6.91E+3	3.63E+1	2.31E+2	2.04E+0	-3.51E+3	3.67E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.62E+3	2.51E+2	4.34E+1	6.91E+3	3.63E+1	2.31E+2	2.04E+0	-3.51E+3	3.67E+3
PET	MJ	6.71E+3	2.54E+2	3.01E+2	7.27E+3	3.68E+1	2.42E+2	2.12E+0	-3.56E+3	3.99E+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	1.84E+0	2.87E-2	6.26E-1	2.50E+0	3.87E-3	1.25E-1	2.37E-3	-8.45E-1	1.78E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	9.20E-4	5.96E-4	6.23E-5	1.58E-3	8.75E-5	3.53E-4	2.32E-6	-7.49E-4	1.27E-3
NHWD	kg	7.14E+0	1.49E+1	1.91E-1	2.22E+1	2.12E+0	1.06E+1	8.48E+0	-2.51E+0	4.10E+1
RWD	kg	2.94E-3	1.56E-3	1.73E-4	4.67E-3	2.33E-4	8.29E-4	1.26E-5	-1.36E-3	4.38E-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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