

Environmental Profile

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

Ecochain v3.5.64



Product: 3065891 - X-Stream PP Pipe BK 400 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	5.45E+1	4.50E+0	1.67E+0	6.06E+1	6.64E-1	1.92E+1	3.13E-1	-3.08E+1	5.00E+1
GWP-f	kg CO2 eq	5.44E+1	4.49E+0	1.21E+0	6.01E+1	6.63E-1	1.93E+1	3.13E-1	-3.07E+1	4.96E+1
GWP-b	kg CO2 eq	7.01E-2	2.04E-3	3.18E-1	3.90E-1	4.03E-4	-2.66E-2	2.72E-4	-1.08E-1	2.56E-1
GWP-luluc	kg CO2 eq	1.77E-2	1.66E-3	1.41E-1	1.60E-1	2.35E-4	3.72E-3	5.31E-6	-5.95E-3	1.58E-1
ODP	kg CFC11 eq	1.20E-6	9.90E-7	1.37E-7	2.32E-6	1.53E-7	4.84E-7	7.84E-9	-1.13E-6	1.83E-6
AP	mol H+ eq	1.99E-1	2.73E-2	1.02E-2	2.37E-1	3.78E-3	2.03E-2	1.87E-4	-8.64E-2	1.75E-1
EP-fw	kg P eq	9.29E-4	4.50E-5	2.23E-5	9.96E-4	5.46E-6	1.07E-4	2.44E-7	-3.39E-4	7.71E-4
EP-m	kg N eq	3.33E-2	9.46E-3	3.03E-3	4.58E-2	1.35E-3	5.91E-3	1.22E-4	-1.53E-2	3.80E-2
EP-T	mol N eq	3.76E-1	1.04E-1	3.33E-2	5.14E-1	1.49E-2	6.51E-2	7.59E-4	-1.69E-1	4.26E-1
POCP	kg NMVOC eq	1.67E-1	2.97E-2	9.25E-3	2.06E-1	4.26E-3	2.06E-2	2.85E-4	-7.80E-2	1.53E-1
ADP-mm	kg Sb eq	6.92E-4	1.13E-4	3.64E-5	8.41E-4	1.72E-5	8.06E-5	1.88E-7	-2.04E-4	7.35E-4
ADP-f	MJ	1.86E+3	6.76E+1	1.20E+1	1.94E+3	1.02E+1	6.46E+1	5.72E-1	-9.70E+2	1.05E+3
WDP	m3 depriv.	3.53E+1	2.41E-1	7.74E+0	4.33E+1	3.12E-2	1.27E+0	2.84E-3	-1.68E+1	2.78E+1
PM	disease inc.	1.71E-6	4.01E-7	1.73E-7	2.28E-6	5.99E-8	3.35E-7	3.94E-9	-7.23E-7	1.95E-6
IR	kBq U-235 eq	1.09E+0	2.83E-1	3.57E-2	1.41E+0	4.45E-2	1.95E-1	2.66E-3	-4.50E-1	1.20E+0
ETP-fw	CTUe	3.48E+2	6.02E+1	3.35E+1	4.41E+2	8.27E+0	7.28E+1	4.79E-1	-1.20E+2	4.03E+2
HTP-c	CTUh	1.26E-8	1.96E-9	1.32E-9	1.59E-8	2.94E-10	8.77E-9	1.40E-11	-5.12E-9	1.99E-8
HTP-nc	CTUh	3.56E-7	6.57E-8	3.61E-8	4.58E-7	9.86E-9	1.08E-7	3.08E-10	-1.45E-7	4.32E-7
SQP	Pt	8.54E+1	5.82E+1	1.58E+0	1.45E+2	8.71E+0	5.16E+1	1.47E+0	-2.60E+1	1.81E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.15E+1	8.43E-1	7.57E+1	1.08E+2	1.46E-1	3.19E+0	2.22E-2	-1.20E+1	9.94E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.15E+1	8.43E-1	7.57E+1	1.08E+2	1.46E-1	3.19E+0	2.22E-2	-1.20E+1	9.94E+1
PENRE	MJ	2.00E+3	7.18E+1	1.28E+1	2.08E+3	1.08E+1	6.88E+1	6.07E-1	-1.05E+3	1.12E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.00E+3	7.18E+1	1.28E+1	2.08E+3	1.08E+1	6.88E+1	6.07E-1	-1.05E+3	1.12E+3
PET	MJ	2.03E+3	7.26E+1	8.85E+1	2.19E+3	1.10E+1	7.20E+1	6.30E-1	-1.06E+3	1.21E+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	5.63E-1	8.19E-3	1.84E-1	7.55E-1	1.15E-3	3.73E-2	7.06E-4	-2.51E-1	5.42E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.28E-4	1.70E-4	1.83E-5	5.16E-4	2.60E-5	1.05E-4	6.89E-7	-2.23E-4	4.25E-4
NHWD	kg	2.33E+0	4.25E+0	5.60E-2	6.64E+0	6.31E-1	3.17E+0	2.52E+0	-7.47E-1	1.22E+1
RWD	kg	9.47E-4	4.44E-4	5.08E-5	1.44E-3	6.92E-5	2.47E-4	3.74E-6	-4.05E-4	1.36E-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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