

Environmental Profile

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

Ecochain v3.5.64



Product: 3065876 - X-Stream PP Pipe BK 200 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]

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	1.15E+1	1.27E+0	4.71E-1	1.32E+1	1.75E-1	7.61E+0	8.26E-2	-8.14E+0	1.30E+1
GWP-f	kg CO2 eq	1.38E+1	1.27E+0	3.42E-1	1.55E+1	1.75E-1	5.21E+0	8.26E-2	-8.11E+0	1.28E+1
GWP-b	kg CO2 eq	-2.34E+0	5.79E-4	8.99E-2	-2.25E+0	1.06E-4	2.40E+0	7.20E-5	-2.82E-2	1.18E-1
GWP-luluc	kg CO2 eq	9.64E-3	4.70E-4	3.97E-2	4.98E-2	6.18E-5	9.77E-4	1.40E-6	-1.57E-3	4.93E-2
ODP	kg CFC11 eq	3.30E-7	2.81E-7	3.87E-8	6.49E-7	4.02E-8	1.27E-7	2.07E-9	-3.05E-7	5.14E-7
AP	mol H+ eq	5.07E-2	7.75E-3	2.89E-3	6.13E-2	9.94E-4	5.35E-3	4.94E-5	-2.27E-2	4.50E-2
EP-fw	kg P eq	2.16E-4	1.28E-5	6.31E-6	2.35E-4	1.44E-6	2.82E-5	6.44E-8	-8.90E-5	1.75E-4
EP-m	kg N eq	8.70E-3	2.68E-3	8.58E-4	1.22E-2	3.56E-4	1.56E-3	3.28E-5	-4.02E-3	1.02E-2
EP-T	mol N eq	9.82E-2	2.96E-2	9.41E-3	1.37E-1	3.92E-3	1.71E-2	2.01E-4	-4.44E-2	1.14E-1
POCP	kg NMVOC eq	4.47E-2	8.42E-3	2.61E-3	5.57E-2	1.12E-3	5.42E-3	7.53E-5	-2.05E-2	4.18E-2
ADP-mm	kg Sb eq	2.53E-4	3.20E-5	1.03E-5	2.96E-4	4.52E-6	2.12E-5	4.98E-8	-5.56E-5	2.66E-4
ADP-f	MJ	4.85E+2	1.92E+1	3.39E+0	5.07E+2	2.68E+0	1.70E+1	1.51E-1	-2.55E+2	2.72E+2
WDP	m3 depriv.	9.94E+0	6.82E-2	2.19E+0	1.22E+1	8.22E-3	3.34E-1	7.52E-4	-4.41E+0	8.13E+0
PM	disease inc.	4.78E-7	1.14E-7	4.88E-8	6.40E-7	1.58E-8	8.80E-8	1.04E-9	-1.90E-7	5.55E-7
IR	kBq U-235 eq	2.75E-1	8.03E-2	1.01E-2	3.65E-1	1.17E-2	5.11E-2	7.02E-4	-1.19E-1	3.10E-1
ETP-fw	CTUe	8.27E+1	1.71E+1	9.46E+0	1.09E+2	2.18E+0	1.94E+1	1.28E-1	-3.16E+1	9.93E+1
HTP-c	CTUh	4.17E-9	5.57E-10	3.74E-10	5.10E-9	7.74E-11	2.30E-9	3.69E-12	-1.35E-9	6.13E-9
HTP-nc	CTUh	9.56E-8	1.86E-8	1.02E-8	1.24E-7	2.59E-9	2.85E-8	8.19E-11	-3.81E-8	1.17E-7
SQP	Pt	2.19E+2	1.65E+1	4.46E-1	2.36E+2	2.29E+0	1.35E+1	3.88E-1	-6.87E+0	2.45E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.89E+1	2.39E-1	2.14E+1	6.05E+1	3.84E-2	8.36E-1	5.88E-3	-3.17E+0	5.82E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.89E+1	2.39E-1	2.14E+1	6.05E+1	3.84E-2	8.36E-1	5.88E-3	-3.17E+0	5.82E+1
PENRE	MJ	5.20E+2	2.04E+1	3.61E+0	5.44E+2	2.85E+0	1.81E+1	1.61E-1	-2.75E+2	2.90E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.20E+2	2.04E+1	3.61E+0	5.44E+2	2.85E+0	1.81E+1	1.61E-1	-2.75E+2	2.90E+2
PET	MJ	5.59E+2	2.06E+1	2.50E+1	6.05E+2	2.88E+0	1.89E+1	1.66E-1	-2.78E+2	3.48E+2
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	1.55E-1	2.32E-3	5.20E-2	2.10E-1	3.03E-4	9.98E-3	1.87E-4	-6.60E-2	1.54E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	7.56E-5	4.83E-5	5.17E-6	1.29E-4	6.85E-6	2.76E-5	1.82E-7	-5.97E-5	1.04E-4
NHWD	kg	6.66E-1	1.21E+0	1.58E-2	1.89E+0	1.66E-1	8.34E-1	6.67E-1	-1.96E-1	3.36E+0
RWD	kg	2.53E-4	1.26E-4	1.44E-5	3.93E-4	1.82E-5	6.47E-5	9.88E-7	-1.07E-4	3.70E-4
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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