

Environmental Profile

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

Ecochain v3.5.64



Product: 3024243 - X-Stream PP Pipe BK 150 SN8 L=6
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	1.57E+1	1.58E+0	5.74E-1	1.79E+1	2.14E-1	7.11E+0	1.01E-1	-9.96E+0	1.53E+1
GWP-f	kg CO2 eq	1.65E+1	1.57E+0	4.16E-1	1.85E+1	2.14E-1	6.28E+0	1.01E-1	-9.92E+0	1.51E+1
GWP-b	kg CO2 eq	-7.70E-1	7.16E-4	1.09E-1	-6.60E-1	1.30E-4	8.37E-1	8.80E-5	-3.47E-2	1.43E-1
GWP-luluc	kg CO2 eq	7.44E-3	5.81E-4	4.84E-2	5.64E-2	7.58E-5	1.20E-3	1.72E-6	-1.92E-3	5.58E-2
ODP	kg CFC11 eq	3.22E-7	3.47E-7	4.71E-8	7.17E-7	4.93E-8	1.56E-7	2.53E-9	-3.68E-7	5.56E-7
AP	mol H+ eq	5.90E-2	9.58E-3	3.52E-3	7.21E-2	1.22E-3	6.56E-3	6.04E-5	-2.79E-2	5.21E-2
EP-fw	kg P eq	2.44E-4	1.58E-5	7.68E-6	2.67E-4	1.76E-6	3.46E-5	7.88E-8	-1.09E-4	1.95E-4
EP-m	kg N eq	9.89E-3	3.32E-3	1.04E-3	1.43E-2	4.36E-4	1.91E-3	3.96E-5	-4.92E-3	1.17E-2
EP-T	mol N eq	1.12E-1	3.66E-2	1.15E-2	1.60E-1	4.81E-3	2.10E-2	2.45E-4	-5.45E-2	1.31E-1
POCP	kg NMVOC eq	5.15E-2	1.04E-2	3.18E-3	6.51E-2	1.37E-3	6.64E-3	9.21E-5	-2.52E-2	4.80E-2
ADP-mm	kg Sb eq	2.48E-4	3.96E-5	1.25E-5	3.01E-4	5.54E-6	2.60E-5	6.09E-8	-6.65E-5	2.66E-4
ADP-f	MJ	5.86E+2	2.37E+1	4.13E+0	6.13E+2	3.29E+0	2.08E+1	1.85E-1	-3.13E+2	3.25E+2
WDP	m3 depriv.	1.18E+1	8.43E-2	2.66E+0	1.45E+1	1.01E-2	4.09E-1	9.22E-4	-5.42E+0	9.51E+0
PM	disease inc.	5.28E-7	1.40E-7	5.95E-8	7.28E-7	1.93E-8	1.08E-7	1.27E-9	-2.33E-7	6.23E-7
IR	kBq U-235 eq	3.07E-1	9.94E-2	1.23E-2	4.18E-1	1.44E-2	6.27E-2	8.58E-4	-1.45E-1	3.51E-1
ETP-fw	CTUe	8.91E+1	2.11E+1	1.15E+1	1.22E+2	2.67E+0	2.36E+1	1.56E-1	-3.87E+1	1.09E+2
HTP-c	CTUh	4.08E-9	6.88E-10	4.55E-10	5.22E-9	9.50E-11	2.83E-9	4.51E-12	-1.65E-9	6.50E-9
HTP-nc	CTUh	1.07E-7	2.30E-8	1.24E-8	1.43E-7	3.18E-9	3.50E-8	9.98E-11	-4.68E-8	1.34E-7
SQP	Pt	9.11E+1	2.04E+1	5.44E-1	1.12E+2	2.81E+0	1.66E+1	4.75E-1	-8.41E+0	1.24E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.02E+1	2.96E-1	2.61E+1	4.65E+1	4.71E-2	1.03E+0	7.17E-3	-3.89E+0	4.37E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.02E+1	2.96E-1	2.61E+1	4.65E+1	4.71E-2	1.03E+0	7.17E-3	-3.89E+0	4.37E+1
PENRE	MJ	6.28E+2	2.52E+1	4.39E+0	6.58E+2	3.49E+0	2.22E+1	1.96E-1	-3.37E+2	3.46E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.28E+2	2.52E+1	4.39E+0	6.58E+2	3.49E+0	2.22E+1	1.96E-1	-3.37E+2	3.46E+2
PET	MJ	6.49E+2	2.55E+1	3.05E+1	7.04E+2	3.54E+0	2.32E+1	2.03E-1	-3.41E+2	3.90E+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	1.79E-1	2.87E-3	6.33E-2	2.45E-1	3.72E-4	1.21E-2	2.28E-4	-8.11E-2	1.77E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	7.47E-5	5.97E-5	6.30E-6	1.41E-4	8.40E-6	3.39E-5	2.23E-7	-7.23E-5	1.11E-4
NHWD	kg	6.72E-1	1.49E+0	1.93E-2	2.18E+0	2.04E-1	1.02E+0	8.15E-1	-2.41E-1	3.98E+0
RWD	kg	2.71E-4	1.56E-4	1.75E-5	4.44E-4	2.23E-5	7.95E-5	1.21E-6	-1.31E-4	4.16E-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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