

Environmental Profile

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

Ecochain v3.5.64



Product: 3065890 - X-Stream PP Pipe BK 300 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	3.30E+1	2.80E+0	1.03E+0	3.68E+1	4.07E-1	1.18E+1	1.92E-1	-1.89E+1	3.03E+1
GWP-f	kg CO2 eq	3.29E+1	2.80E+0	7.47E-1	3.65E+1	4.07E-1	1.18E+1	1.92E-1	-1.88E+1	3.00E+1
GWP-b	kg CO2 eq	6.09E-2	1.27E-3	1.97E-1	2.59E-1	2.47E-4	-1.63E-2	1.67E-4	-6.61E-2	1.77E-1
GWP-luluc	kg CO2 eq	1.03E-2	1.03E-3	8.68E-2	9.82E-2	1.44E-4	2.28E-3	3.25E-6	-3.65E-3	9.70E-2
ODP	kg CFC11 eq	6.97E-7	6.18E-7	8.46E-8	1.40E-6	9.37E-8	2.97E-7	4.81E-9	-6.95E-7	1.10E-6
AP	mol H+ eq	1.20E-1	1.70E-2	6.33E-3	1.43E-1	2.32E-3	1.25E-2	1.15E-4	-5.30E-2	1.05E-1
EP-fw	kg P eq	5.47E-4	2.81E-5	1.38E-5	5.89E-4	3.35E-6	6.58E-5	1.49E-7	-2.08E-4	4.50E-4
EP-m	kg N eq	2.00E-2	5.90E-3	1.88E-3	2.78E-2	8.29E-4	3.62E-3	7.47E-5	-9.36E-3	2.30E-2
EP-T	mol N eq	2.26E-1	6.51E-2	2.06E-2	3.11E-1	9.14E-3	3.99E-2	4.66E-4	-1.04E-1	2.57E-1
POCP	kg NMVOC eq	1.01E-1	1.85E-2	5.71E-3	1.25E-1	2.61E-3	1.26E-2	1.75E-4	-4.78E-2	9.30E-2
ADP-mm	kg Sb eq	4.22E-4	7.04E-5	2.25E-5	5.15E-4	1.05E-5	4.94E-5	1.15E-7	-1.25E-4	4.50E-4
ADP-f	MJ	1.13E+3	4.22E+1	7.42E+0	1.18E+3	6.24E+0	3.96E+1	3.51E-1	-5.95E+2	6.35E+2
WDP	m3 depriv.	2.17E+1	1.50E-1	4.78E+0	2.66E+1	1.92E-2	7.77E-1	1.74E-3	-1.03E+1	1.71E+1
PM	disease inc.	1.03E-6	2.50E-7	1.07E-7	1.39E-6	3.67E-8	2.06E-7	2.41E-9	-4.43E-7	1.19E-6
IR	kBq U-235 eq	6.46E-1	1.77E-1	2.21E-2	8.45E-1	2.73E-2	1.19E-1	1.63E-3	-2.76E-1	7.17E-1
ETP-fw	CTUe	2.03E+2	3.75E+1	2.07E+1	2.61E+2	5.07E+0	4.47E+1	2.94E-1	-7.35E+1	2.38E+2
HTP-c	CTUh	7.58E-9	1.22E-9	8.17E-10	9.62E-9	1.80E-10	5.38E-9	8.56E-12	-3.14E-9	1.20E-8
HTP-nc	CTUh	2.14E-7	4.10E-8	2.23E-8	2.77E-7	6.04E-9	6.65E-8	1.89E-10	-8.90E-8	2.61E-7
SQP	Pt	4.95E+1	3.63E+1	9.76E-1	8.68E+1	5.34E+0	3.16E+1	9.01E-1	-1.60E+1	1.09E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.87E+1	5.26E-1	4.68E+1	6.60E+1	8.96E-2	1.95E+0	1.36E-2	-7.39E+0	6.07E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.87E+1	5.26E-1	4.68E+1	6.60E+1	8.96E-2	1.95E+0	1.36E-2	-7.39E+0	6.07E+1
PENRE	MJ	1.22E+3	4.48E+1	7.88E+0	1.27E+3	6.63E+0	4.22E+1	3.72E-1	-6.41E+2	6.78E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.22E+3	4.48E+1	7.88E+0	1.27E+3	6.63E+0	4.22E+1	3.72E-1	-6.41E+2	6.78E+2
PET	MJ	1.24E+3	4.53E+1	5.47E+1	1.34E+3	6.72E+0	4.42E+1	3.86E-1	-6.49E+2	7.38E+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	3.41E-1	5.11E-3	1.14E-1	4.60E-1	7.07E-4	2.29E-2	4.33E-4	-1.54E-1	3.30E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.87E-4	1.06E-4	1.13E-5	3.05E-4	1.60E-5	6.43E-5	4.23E-7	-1.37E-4	2.49E-4
NHWD	kg	1.38E+0	2.65E+0	3.46E-2	4.06E+0	3.87E-1	1.94E+0	1.55E+0	-4.58E-1	7.48E+0
RWD	kg	5.62E-4	2.77E-4	3.14E-5	8.71E-4	4.25E-5	1.51E-4	2.29E-6	-2.48E-4	8.18E-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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