

Environmental Profile

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

Ecochain v3.5.64



Product: 3065878 - X-Stream PP Pipe BK 250 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

This document and supporting material contain confidential and proprietary business information of Wavin - SE - Eskilstuna. These materials may be printed or (photo) copied or otherwise used only with the written consent of Wavin - SE - Eskilstuna.

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.61E+1	2.27E+0	8.28E-1	2.92E+1	3.25E-1	9.43E+0	1.53E-1	-1.51E+1	2.40E+1
GWP-f	kg CO2 eq	2.60E+1	2.27E+0	6.00E-1	2.89E+1	3.25E-1	9.45E+0	1.53E-1	-1.51E+1	2.38E+1
GWP-b	kg CO2 eq	5.93E-2	1.03E-3	1.58E-1	2.18E-1	1.97E-4	-1.30E-2	1.34E-4	-5.28E-2	1.53E-1
GWP-luluc	kg CO2 eq	7.93E-3	8.37E-4	6.98E-2	7.86E-2	1.15E-4	1.83E-3	2.60E-6	-2.92E-3	7.76E-2
ODP	kg CFC11 eq	5.36E-7	5.00E-7	6.80E-8	1.10E-6	7.49E-8	2.37E-7	3.84E-9	-5.56E-7	8.64E-7
AP	mol H+ eq	9.44E-2	1.38E-2	5.08E-3	1.13E-1	1.85E-3	9.97E-3	9.16E-5	-4.24E-2	8.29E-2
EP-fw	kg P eq	4.24E-4	2.27E-5	1.11E-5	4.58E-4	2.68E-6	5.26E-5	1.19E-7	-1.66E-4	3.47E-4
EP-m	kg N eq	1.57E-2	4.78E-3	1.51E-3	2.20E-2	6.63E-4	2.90E-3	5.97E-5	-7.48E-3	1.82E-2
EP-T	mol N eq	1.78E-1	5.27E-2	1.65E-2	2.47E-1	7.30E-3	3.19E-2	3.72E-4	-8.28E-2	2.04E-1
POCP	kg NMVOC eq	8.00E-2	1.50E-2	4.59E-3	9.96E-2	2.09E-3	1.01E-2	1.40E-4	-3.82E-2	7.37E-2
ADP-mm	kg Sb eq	3.36E-4	5.70E-5	1.81E-5	4.11E-4	8.41E-6	3.95E-5	9.23E-8	-9.99E-5	3.59E-4
ADP-f	MJ	9.03E+2	3.41E+1	5.96E+0	9.43E+2	4.99E+0	3.17E+1	2.81E-1	-4.76E+2	5.04E+2
WDP	m3 depriv.	1.73E+1	1.21E-1	3.84E+0	2.13E+1	1.53E-2	6.21E-1	1.40E-3	-8.24E+0	1.37E+1
PM	disease inc.	8.12E-7	2.02E-7	8.58E-8	1.10E-6	2.93E-8	1.64E-7	1.93E-9	-3.54E-7	9.41E-7
IR	kBq U-235 eq	5.05E-1	1.43E-1	1.77E-2	6.65E-1	2.18E-2	9.54E-2	1.30E-3	-2.21E-1	5.63E-1
ETP-fw	CTUe	1.57E+2	3.04E+1	1.66E+1	2.04E+2	4.05E+0	3.57E+1	2.35E-1	-5.87E+1	1.85E+2
HTP-c	CTUh	5.97E-9	9.91E-10	6.57E-10	7.62E-9	1.44E-10	4.30E-9	6.84E-12	-2.51E-9	9.56E-9
HTP-nc	CTUh	1.69E-7	3.32E-8	1.79E-8	2.20E-7	4.83E-9	5.32E-8	1.51E-10	-7.12E-8	2.07E-7
SQP	Pt	3.79E+1	2.94E+1	7.84E-1	6.81E+1	4.27E+0	2.53E+1	7.20E-1	-1.27E+1	8.56E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.45E+1	4.25E-1	3.76E+1	5.26E+1	7.16E-2	1.56E+0	1.09E-2	-5.91E+0	4.83E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.45E+1	4.25E-1	3.76E+1	5.26E+1	7.16E-2	1.56E+0	1.09E-2	-5.91E+0	4.83E+1
PENRE	MJ	9.69E+2	3.62E+1	6.33E+0	1.01E+3	5.30E+0	3.37E+1	2.98E-1	-5.13E+2	5.38E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	9.69E+2	3.62E+1	6.33E+0	1.01E+3	5.30E+0	3.37E+1	2.98E-1	-5.13E+2	5.38E+2
PET	MJ	9.83E+2	3.67E+1	4.39E+1	1.06E+3	5.37E+0	3.53E+1	3.09E-1	-5.18E+2	5.86E+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	2.71E-1	4.14E-3	9.13E-2	3.66E-1	5.65E-4	1.83E-2	3.46E-4	-1.23E-1	2.62E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.42E-4	8.60E-5	9.08E-6	2.37E-4	1.28E-5	5.14E-5	3.38E-7	-1.09E-4	1.92E-4
NHWD	kg	1.07E+0	2.15E+0	2.78E-2	3.24E+0	3.09E-1	1.55E+0	1.24E+0	-3.66E-1	5.98E+0
RWD	kg	4.38E-4	2.24E-4	2.52E-5	6.88E-4	3.39E-5	1.21E-4	1.83E-6	-1.99E-4	6.46E-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



Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
<https://www.ecochain.com>
+31 20 3035 777