

Environmental Profile

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

Ecochain v3.5.64



Product: 3021151 - X-Stream PP Pipe BK 600 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	1.34E+2	1.06E+1	3.73E+0	1.48E+2	1.60E+0	4.64E+1	7.54E-1	-7.43E+1	1.23E+2
GWP-f	kg CO2 eq	1.34E+2	1.06E+1	2.71E+0	1.47E+2	1.60E+0	4.65E+1	7.54E-1	-7.41E+1	1.22E+2
GWP-b	kg CO2 eq	6.12E-2	4.80E-3	7.12E-1	7.78E-1	9.71E-4	-6.42E-2	6.57E-4	-2.60E-1	4.56E-1
GWP-luluc	kg CO2 eq	4.60E-2	3.89E-3	3.15E-1	3.65E-1	5.66E-4	8.98E-3	1.28E-5	-1.44E-2	3.60E-1
ODP	kg CFC11 eq	3.09E-6	2.33E-6	3.07E-7	5.73E-6	3.69E-7	1.17E-6	1.89E-8	-2.74E-6	4.55E-6
AP	mol H+ eq	4.95E-1	6.41E-2	2.29E-2	5.82E-1	9.11E-3	4.90E-2	4.51E-4	-2.08E-1	4.32E-1
EP-fw	kg P eq	2.37E-3	1.06E-4	5.00E-5	2.53E-3	1.32E-5	2.59E-4	5.87E-7	-8.17E-4	1.99E-3
EP-m	kg N eq	8.29E-2	2.22E-2	6.80E-3	1.12E-1	3.26E-3	1.43E-2	2.94E-4	-3.68E-2	9.30E-2
EP-T	mol N eq	9.35E-1	2.45E-1	7.46E-2	1.25E+0	3.59E-2	1.57E-1	1.83E-3	-4.07E-1	1.04E+0
POCP	kg NMVOC eq	4.12E-1	6.97E-2	2.07E-2	5.02E-1	1.03E-2	4.96E-2	6.87E-4	-1.88E-1	3.75E-1
ADP-mm	kg Sb eq	1.66E-3	2.65E-4	8.15E-5	2.01E-3	4.14E-5	1.94E-4	4.54E-7	-4.92E-4	1.75E-3
ADP-f	MJ	4.53E+3	1.59E+2	2.69E+1	4.71E+3	2.46E+1	1.56E+2	1.38E+0	-2.34E+3	2.55E+3
WDP	m3 depriv.	8.51E+1	5.65E-1	1.73E+1	1.03E+2	7.54E-2	3.06E+0	6.83E-3	-4.05E+1	6.56E+1
PM	disease inc.	4.21E-6	9.41E-7	3.87E-7	5.54E-6	1.44E-7	8.08E-7	9.49E-9	-1.74E-6	4.76E-6
IR	kBq U-235 eq	2.74E+0	6.66E-1	8.00E-2	3.49E+0	1.07E-1	4.69E-1	6.40E-3	-1.09E+0	2.98E+0
ETP-fw	CTUe	8.97E+2	1.41E+2	7.50E+1	1.11E+3	1.99E+1	1.76E+2	1.16E+0	-2.89E+2	1.02E+3
HTP-c	CTUh	3.12E-8	4.61E-9	2.96E-9	3.88E-8	7.10E-10	2.11E-8	3.36E-11	-1.24E-8	4.83E-8
HTP-nc	CTUh	8.84E-7	1.54E-7	8.08E-8	1.12E-6	2.38E-8	2.62E-7	7.43E-10	-3.50E-7	1.05E-6
SQP	Pt	2.22E+2	1.37E+2	3.54E+0	3.62E+2	2.10E+1	1.24E+2	3.54E+0	-6.27E+1	4.48E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	8.00E+1	1.98E+0	1.70E+2	2.52E+2	3.52E-1	7.68E+0	5.35E-2	-2.91E+1	2.31E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	8.00E+1	1.98E+0	1.70E+2	2.52E+2	3.52E-1	7.68E+0	5.35E-2	-2.91E+1	2.31E+2
PENRE	MJ	4.86E+3	1.69E+2	2.86E+1	5.05E+3	2.61E+1	1.66E+2	1.46E+0	-2.52E+3	2.73E+3
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.86E+3	1.69E+2	2.86E+1	5.05E+3	2.61E+1	1.66E+2	1.46E+0	-2.52E+3	2.73E+3
PET	MJ	4.94E+3	1.71E+2	1.98E+2	5.31E+3	2.64E+1	1.74E+2	1.52E+0	-2.55E+3	2.96E+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	1.38E+0	1.92E-2	4.12E-1	1.81E+0	2.78E-3	8.99E-2	1.70E-3	-6.06E-1	1.30E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	8.67E-4	4.00E-4	4.10E-5	1.31E-3	6.28E-5	2.53E-4	1.66E-6	-5.38E-4	1.09E-3
NHWD	kg	5.89E+0	9.99E+0	1.26E-1	1.60E+1	1.52E+0	7.64E+0	6.08E+0	-1.80E+0	2.95E+1
RWD	kg	2.39E-3	1.04E-3	1.14E-4	3.55E-3	1.67E-4	5.95E-4	9.01E-6	-9.77E-4	3.34E-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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