Environmental Profile

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

Ecochain v3.5.80

Product:	3002732 - X-Stream Click Inlet 125SW/300 IT BK
Unit:	1 piece
Manufacturer:	Wavin - PL -Buk - Extra products

Wavin X-Stream is a new generation of double-walled pipes and □ttings made of polypropylene. The system is

LCA standard:	EN15804+A2 (2019)
Standard database:	Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified:	Yes
Issue date:	08-06-2023
End of validity:	08-06-2028
Verifier:	Martijn van Hövell - 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 - PL -Buk - Extra products (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

A1 Raw material supply A2 Transport A3 Manufacturing

Construction process stage

A4 Transport gate to site
A5 Assembly / Construction installation process

Use stage

B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment
B6 Operational energy use B7 Operational water use

End-of-Life stage

C1 De-construction demolition C2 Transport C3 Waste processing
C4 Disposal

Benefits and loads beyond the system boundaries

D Reuse- Recovery- Recycling- potential

Environmental impacts and parameters

GWP-total = EF EN15804+A2 Climate Change [kg CO2 eq]; **GWP-f** = EF Climate change - Fossil [kg CO2 eq]; **GWP-b** = EF EN15804+A2 Climate Change - Biogenic [kg CO2 eq]; **GWP-luluc** = EF EN15804+A2 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

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	5.36E+0	1.39E-2	1.45E-4	5.37E+0	6.79E-2	3.73E+0	2.36E-2	-3.15E+0	6.04E+0
GWP-f	kg CO2 eq	6.38E+0	1.39E-2	1.46E-4	6.39E+0	6.79E-2	2.55E+0	2.36E-2	-3.39E+0	5.64E+0
GWP-b	kg CO2 eq	-1.03E+0	8.41E-6	-1.54E-6	-1.03E+0	4.12E-5	1.18E+0	2.88E-5	2.46E-1	4.02E-1
GWP-luluc	kg CO2 eq	6.39E-3	4.90E-6	1.49E-7	6.40E-3	2.40E-5	8.12E-4	5.61E-7	-4.07E-3	3.17E-3
ODP	kg CFC11 eq	2.88E-6	3.19E-9	8.26E-12	2.88E-6	1.56E-8	2.24E-7	8.36E-10	-1.36E-6	1.76E-6
AP	mol H+ eq	2.94E-2	7.89E-5	1.47E-6	2.95E-2	3.87E-4	3.96E-3	2.02E-5	-1.29E-2	2.10E-2
EP-fw	kg P eq	2.63E-4	1.14E-7	8.24E-9	2.63E-4	5.59E-7	2.72E-5	2.58E-8	-1.28E-4	1.63E-4
EP-m	kg N eq	5.21E-3	2.82E-5	1.55E-7	5.24E-3	1.38E-4	9.96E-4	1.50E-5	-2.42E-3	3.96E-3
EP-T	mol N eq	5.61E-2	3.11E-4	1.85E-6	5.64E-2	1.52E-3	1.10E-2	8.10E-5	-2.64E-2	4.25E-2
POCP	kg NMVOC eq	2.01E-2	8.89E-5	6.28E-7	2.01E-2	4.36E-4	3.26E-3	2.81E-5	-9.08E-3	1.48E-2
ADP-mm	kg Sb eq	3.84E-4	3.58E-7	1.97E-8	3.85E-4	1.76E-6	1.53E-5	2.00E-8	-6.58E-5	3.36E-4
ADP-f	MJ	1.62E+2	2.13E-1	1.36E-3	1.63E+2	1.04E+0	1.05E+1	6.10E-2	-8.01E+1	9.41E+1
WDP	m3 depriv.	8.77E+0	6.53E-4	5.22E-5	8.77E+0	3.20E-3	4.11E-1	2.84E-4	-4.26E+0	4.93E+0
PM	disease inc.	2.45E-7	1.25E-9	9.08E-12	2.46E-7	6.13E-9	4.87E-8	4.19E-10	-1.13E-7	1.88E-7
IR	kBq U-235 eq	3.39E-1	9.29E-4	1.02E-6	3.40E-1	4.55E-3	3.71E-2	2.83E-4	-1.49E-1	2.34E-1
ETP-fw	CTUe	1.38E+2	1.73E-1	1.21E-2	1.39E+2	8.46E-1	7.94E+1	8.73E-1	-6.16E+1	1.58E+2
HTP-c	CTUh	4.53E-9	6.14E-12	6.17E-13	4.54E-9	3.01E-11	1.14E-9	1.60E-12	-1.96E-9	3.75E-9
HTP-nc	CTUh	1.31E-7	2.06E-10	1.57E-11	1.31E-7	1.01E-9	2.80E-8	1.70E-10	-5.49E-8	1.05E-7
SQP	Pt	1.20E+2	1.82E-1	2.24E-3	1.21E+2	8.92E-1	6.47E+0	1.57E-1	-1.29E+2	-1.16E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.59E+1	3.05E-3	2.40E-2	3.59E+1	1.50E-2	7.47E-1	2.38E-3	-2.26E+1	1.41E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.59E+1	3.05E-3	2.40E-2	3.59E+1	1.50E-2	7.47E-1	2.38E-3	-2.26E+1	1.41E+1
PENRE	MJ	1.74E+2	2.26E-1	1.44E-3	1.74E+2	1.11E+0	1.12E+1	6.47E-2	-8.63E+1	1.00E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.74E+2	2.26E-1	1.44E-3	1.74E+2	1.11E+0	1.12E+1	6.47E-2	-8.63E+1	1.00E+2
PET	MJ	2.10E+2	2.29E-1	2.55E-2	2.10E+2	1.12E+0	1.19E+1	6.71E-2	-1.09E+2	1.14E+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	1.04E-1	2.41E-5	1.46E-6	1.04E-1	1.18E-4	1.19E-2	7.53E-5	-5.22E-2	6.40E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.23E-4	5.44E-7	2.73E-13	1.23E-4	2.66E-6	1.76E-5	7.33E-8	-6.97E-5	7.41E-5
NHWD	kg	6.36E-1	1.32E-2	1.05E-6	6.49E-1	6.46E-2	4.01E-1	2.69E-1	-2.68E-1	1.11E+0
RWD	kg	3.28E-4	1.45E-6	1.10E-13	3.30E-4	7.09E-6	4.02E-5	3.99E-7	-1.36E-4	2.42E-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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