

Environmental Profile

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

Ecochain v3.5.80



Product: 3001409 - X-Stream Click Inlet 150TW/250 BK
Unit: 1 piece
Manufacturer: Wavin - PL -Buk - Extra products

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



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

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					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 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]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	4.76E+0	1.25E-2	1.45E-4	4.77E+0	6.20E-2	3.43E+0	2.05E-2	-2.84E+0	5.45E+0
GWP-f	kg CO2 eq	5.80E+0	1.25E-2	1.46E-4	5.81E+0	6.20E-2	2.24E+0	2.05E-2	-3.07E+0	5.06E+0
GWP-b	kg CO2 eq	-1.05E+0	7.60E-6	-1.54E-6	-1.05E+0	3.76E-5	1.20E+0	2.61E-5	2.34E-1	3.85E-1
GWP-luluc	kg CO2 eq	6.14E-3	4.43E-6	1.49E-7	6.14E-3	2.19E-5	7.81E-4	5.08E-7	-4.04E-3	2.91E-3
ODP	kg CFC11 eq	2.84E-6	2.89E-9	8.26E-12	2.84E-6	1.43E-8	2.20E-7	7.59E-10	-1.35E-6	1.73E-6
AP	mol H+ eq	2.71E-2	7.13E-5	1.47E-6	2.72E-2	3.53E-4	3.77E-3	1.84E-5	-1.21E-2	1.92E-2
EP-fw	kg P eq	2.52E-4	1.03E-7	8.24E-9	2.52E-4	5.10E-7	2.63E-5	2.34E-8	-1.25E-4	1.54E-4
EP-m	kg N eq	4.82E-3	2.55E-5	1.55E-7	4.84E-3	1.26E-4	9.38E-4	1.34E-5	-2.28E-3	3.64E-3
EP-T	mol N eq	5.17E-2	2.81E-4	1.85E-6	5.20E-2	1.39E-3	1.03E-2	7.35E-5	-2.48E-2	3.90E-2
POCP	kg NMVOC eq	1.80E-2	8.04E-5	6.28E-7	1.81E-2	3.98E-4	3.07E-3	2.53E-5	-8.34E-3	1.33E-2
ADP-mm	kg Sb eq	3.30E-4	3.24E-7	1.97E-8	3.30E-4	1.60E-6	1.46E-5	1.82E-8	-6.25E-5	2.84E-4
ADP-f	MJ	1.43E+2	1.92E-1	1.36E-3	1.43E+2	9.51E-1	9.95E+0	5.53E-2	-7.10E+1	8.32E+1
WDP	m3 depriv.	8.40E+0	5.90E-4	5.22E-5	8.40E+0	2.92E-3	3.99E-1	2.57E-4	-4.12E+0	4.68E+0
PM	disease inc.	2.21E-7	1.13E-9	9.08E-12	2.22E-7	5.59E-9	4.58E-8	3.81E-10	-1.07E-7	1.67E-7
IR	kBq U-235 eq	3.20E-1	8.40E-4	1.02E-6	3.21E-1	4.16E-3	3.55E-2	2.57E-4	-1.45E-1	2.16E-1
ETP-fw	CTUe	1.31E+2	1.56E-1	1.21E-2	1.31E+2	7.72E-1	7.86E+1	8.67E-1	-6.03E+1	1.51E+2
HTP-c	CTUh	4.18E-9	5.55E-12	6.17E-13	4.19E-9	2.75E-11	1.06E-9	1.46E-12	-1.91E-9	3.37E-9
HTP-nc	CTUh	1.24E-7	1.86E-10	1.57E-11	1.24E-7	9.21E-10	2.70E-8	1.67E-10	-5.56E-8	9.65E-8
SQP	Pt	1.20E+2	1.64E-1	2.24E-3	1.20E+2	8.14E-1	6.03E+0	1.42E-1	-1.29E+2	-2.25E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.50E+1	2.76E-3	2.40E-2	3.50E+1	1.36E-2	7.20E-1	2.15E-3	-2.26E+1	1.31E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.50E+1	2.76E-3	2.40E-2	3.50E+1	1.36E-2	7.20E-1	2.15E-3	-2.26E+1	1.31E+1
PENRE	MJ	1.53E+2	2.04E-1	1.44E-3	1.54E+2	1.01E+0	1.06E+1	5.87E-2	-7.65E+1	8.88E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.53E+2	2.04E-1	1.44E-3	1.54E+2	1.01E+0	1.06E+1	5.87E-2	-7.65E+1	8.88E+1
PET	MJ	1.88E+2	2.07E-1	2.55E-2	1.89E+2	1.02E+0	1.13E+1	6.09E-2	-9.91E+1	1.02E+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	9.75E-2	2.17E-5	1.46E-6	9.75E-2	1.08E-4	1.14E-2	6.83E-5	-5.01E-2	5.90E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.22E-4	4.91E-7	2.73E-13	1.22E-4	2.43E-6	1.66E-5	6.65E-8	-6.53E-5	7.60E-5
NHWD	kg	6.00E-1	1.19E-2	1.05E-6	6.12E-1	5.90E-2	3.70E-1	2.44E-1	-2.61E-1	1.02E+0
RWD	kg	3.06E-4	1.31E-6	1.10E-13	3.07E-4	6.47E-6	3.81E-5	3.62E-7	-1.32E-4	2.20E-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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