

Environmental Profile

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

Ecochain v3.5.80



Product: 3001412 - X-Stream Click Inlet 160SW/300 HI 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	5.83E+0	1.90E-2	1.45E-4	5.85E+0	7.37E-2	3.94E+0	2.51E-2	-3.39E+0	6.49E+0
GWP-f	kg CO2 eq	6.87E+0	1.90E-2	1.46E-4	6.89E+0	7.37E-2	2.73E+0	2.51E-2	-3.63E+0	6.09E+0
GWP-b	kg CO2 eq	-1.04E+0	1.16E-5	-1.54E-6	-1.04E+0	4.47E-5	1.20E+0	3.12E-5	2.44E-1	4.04E-1
GWP-luluc	kg CO2 eq	6.91E-3	6.74E-6	1.49E-7	6.91E-3	2.61E-5	9.02E-4	6.08E-7	-4.38E-3	3.46E-3
ODP	kg CFC11 eq	3.25E-6	4.39E-9	8.26E-12	3.25E-6	1.70E-8	2.51E-7	9.06E-10	-1.54E-6	1.98E-6
AP	mol H+ eq	3.19E-2	1.08E-4	1.47E-6	3.20E-2	4.20E-4	4.37E-3	2.19E-5	-1.39E-2	2.29E-2
EP-fw	kg P eq	2.90E-4	1.57E-7	8.24E-9	2.90E-4	6.06E-7	3.03E-5	2.80E-8	-1.40E-4	1.81E-4
EP-m	kg N eq	5.61E-3	3.88E-5	1.55E-7	5.65E-3	1.50E-4	1.09E-3	1.62E-5	-2.61E-3	4.31E-3
EP-T	mol N eq	6.04E-2	4.27E-4	1.85E-6	6.08E-2	1.65E-3	1.20E-2	8.78E-5	-2.83E-2	4.62E-2
POCP	kg NMVOC eq	2.14E-2	1.22E-4	6.28E-7	2.15E-2	4.73E-4	3.57E-3	3.04E-5	-9.63E-3	1.60E-2
ADP-mm	kg Sb eq	4.15E-4	4.92E-7	1.97E-8	4.16E-4	1.91E-6	1.69E-5	2.17E-8	-7.27E-5	3.62E-4
ADP-f	MJ	1.73E+2	2.92E-1	1.36E-3	1.73E+2	1.13E+0	1.16E+1	6.61E-2	-8.51E+1	1.01E+2
WDP	m3 depriv.	9.74E+0	8.97E-4	5.22E-5	9.74E+0	3.47E-3	4.59E-1	3.08E-4	-4.71E+0	5.49E+0
PM	disease inc.	2.60E-7	1.72E-9	9.08E-12	2.62E-7	6.65E-9	5.33E-8	4.55E-10	-1.20E-7	2.02E-7
IR	kBq U-235 eq	3.75E-1	1.28E-3	1.02E-6	3.76E-1	4.94E-3	4.10E-2	3.07E-4	-1.64E-1	2.58E-1
ETP-fw	CTUe	1.49E+2	2.37E-1	1.21E-2	1.49E+2	9.18E-1	8.97E+1	9.88E-1	-6.67E+1	1.74E+2
HTP-c	CTUh	4.76E-9	8.44E-12	6.17E-13	4.77E-9	3.27E-11	1.24E-9	1.74E-12	-2.13E-9	3.92E-9
HTP-nc	CTUh	1.42E-7	2.83E-10	1.57E-11	1.43E-7	1.09E-9	3.11E-8	1.91E-10	-6.29E-8	1.12E-7
SQP	Pt	1.24E+2	2.50E-1	2.24E-3	1.24E+2	9.67E-1	7.05E+0	1.70E-1	-1.33E+2	-3.35E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.80E+1	4.19E-3	2.40E-2	3.80E+1	1.62E-2	8.30E-1	2.58E-3	-2.34E+1	1.54E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.80E+1	4.19E-3	2.40E-2	3.80E+1	1.62E-2	8.30E-1	2.58E-3	-2.34E+1	1.54E+1
PENRE	MJ	1.85E+2	3.10E-1	1.44E-3	1.86E+2	1.20E+0	1.23E+1	7.02E-2	-9.17E+1	1.07E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.85E+2	3.10E-1	1.44E-3	1.86E+2	1.20E+0	1.23E+1	7.02E-2	-9.17E+1	1.07E+2
PET	MJ	2.23E+2	3.14E-1	2.55E-2	2.24E+2	1.22E+0	1.31E+1	7.27E-2	-1.15E+2	1.23E+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	1.14E-1	3.31E-5	1.46E-6	1.14E-1	1.28E-4	1.32E-2	8.17E-5	-5.70E-2	7.07E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.39E-4	7.47E-7	2.73E-13	1.39E-4	2.89E-6	1.93E-5	7.94E-8	-7.50E-5	8.66E-5
NHWD	kg	6.86E-1	1.81E-2	1.05E-6	7.04E-1	7.01E-2	4.35E-1	2.92E-1	-2.92E-1	1.21E+0
RWD	kg	3.61E-4	1.99E-6	1.10E-13	3.63E-4	7.69E-6	4.41E-5	4.32E-7	-1.50E-4	2.66E-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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