

Environmental Profile

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

Ecochain v3.5.80



Product: 3031546 - X-Stream Click Inlet 125SW/400 IT 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	5.28E+0	1.39E-2	1.45E-4	5.30E+0	6.70E-2	3.71E+0	2.33E-2	-3.11E+0	5.98E+0
GWP-f	kg CO2 eq	6.30E+0	1.39E-2	1.46E-4	6.32E+0	6.70E-2	2.52E+0	2.33E-2	-3.35E+0	5.58E+0
GWP-b	kg CO2 eq	-1.03E+0	8.41E-6	-1.54E-6	-1.03E+0	4.07E-5	1.18E+0	2.84E-5	2.46E-1	4.02E-1
GWP-luluc	kg CO2 eq	6.34E-3	4.90E-6	1.49E-7	6.34E-3	2.37E-5	8.00E-4	5.54E-7	-4.04E-3	3.12E-3
ODP	kg CFC11 eq	2.84E-6	3.19E-9	8.26E-12	2.84E-6	1.54E-8	2.21E-7	8.25E-10	-1.34E-6	1.73E-6
AP	mol H+ eq	2.91E-2	7.89E-5	1.47E-6	2.92E-2	3.81E-4	3.91E-3	2.00E-5	-1.27E-2	2.07E-2
EP-fw	kg P eq	2.60E-4	1.14E-7	8.24E-9	2.60E-4	5.51E-7	2.68E-5	2.55E-8	-1.26E-4	1.61E-4
EP-m	kg N eq	5.15E-3	2.82E-5	1.55E-7	5.18E-3	1.36E-4	9.83E-4	1.48E-5	-2.40E-3	3.92E-3
EP-T	mol N eq	5.55E-2	3.11E-4	1.85E-6	5.58E-2	1.50E-3	1.08E-2	7.99E-5	-2.62E-2	4.20E-2
POCP	kg NMVOC eq	1.99E-2	8.89E-5	6.28E-7	1.99E-2	4.30E-4	3.22E-3	2.78E-5	-8.99E-3	1.46E-2
ADP-mm	kg Sb eq	3.82E-4	3.58E-7	1.97E-8	3.82E-4	1.73E-6	1.51E-5	1.97E-8	-6.50E-5	3.34E-4
ADP-f	MJ	1.61E+2	2.13E-1	1.36E-3	1.61E+2	1.03E+0	1.04E+1	6.02E-2	-7.91E+1	9.31E+1
WDP	m3 depriv.	8.65E+0	6.53E-4	5.22E-5	8.65E+0	3.15E-3	4.05E-1	2.81E-4	-4.20E+0	4.86E+0
PM	disease inc.	2.42E-7	1.25E-9	9.08E-12	2.44E-7	6.04E-9	4.81E-8	4.14E-10	-1.12E-7	1.86E-7
IR	kBq U-235 eq	3.36E-1	9.29E-4	1.02E-6	3.36E-1	4.49E-3	3.66E-2	2.80E-4	-1.47E-1	2.31E-1
ETP-fw	CTUe	1.37E+2	1.73E-1	1.21E-2	1.37E+2	8.35E-1	7.82E+1	8.60E-1	-6.10E+1	1.56E+2
HTP-c	CTUh	4.48E-9	6.14E-12	6.17E-13	4.48E-9	2.97E-11	1.12E-9	1.58E-12	-1.94E-9	3.70E-9
HTP-nc	CTUh	1.29E-7	2.06E-10	1.57E-11	1.29E-7	9.95E-10	2.76E-8	1.67E-10	-5.42E-8	1.04E-7
SQP	Pt	1.20E+2	1.82E-1	2.24E-3	1.20E+2	8.79E-1	6.38E+0	1.55E-1	-1.29E+2	-1.42E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.55E+1	3.05E-3	2.40E-2	3.56E+1	1.47E-2	7.36E-1	2.35E-3	-2.26E+1	1.37E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.55E+1	3.05E-3	2.40E-2	3.56E+1	1.47E-2	7.36E-1	2.35E-3	-2.26E+1	1.37E+1
PENRE	MJ	1.72E+2	2.26E-1	1.44E-3	1.72E+2	1.09E+0	1.10E+1	6.39E-2	-8.53E+1	9.92E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.72E+2	2.26E-1	1.44E-3	1.72E+2	1.09E+0	1.10E+1	6.39E-2	-8.53E+1	9.92E+1
PET	MJ	2.08E+2	2.29E-1	2.55E-2	2.08E+2	1.11E+0	1.18E+1	6.62E-2	-1.08E+2	1.13E+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	1.03E-1	2.41E-5	1.46E-6	1.03E-1	1.16E-4	1.17E-2	7.43E-5	-5.16E-2	6.31E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.21E-4	5.44E-7	2.73E-13	1.22E-4	2.63E-6	1.74E-5	7.23E-8	-6.89E-5	7.31E-5
NHWD	kg	6.29E-1	1.32E-2	1.05E-6	6.42E-1	6.37E-2	3.96E-1	2.65E-1	-2.65E-1	1.10E+0
RWD	kg	3.25E-4	1.45E-6	1.10E-13	3.26E-4	6.99E-6	3.96E-5	3.93E-7	-1.34E-4	2.39E-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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