

Environmental Profile

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

Ecochain v3.5.80



Product: 3001410 - X-Stream Click Inlet 160SW/250 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	5.94E+0	1.90E-2	1.45E-4	5.96E+0	7.50E-2	3.97E+0	2.55E-2	-3.45E+0	6.58E+0
GWP-f	kg CO2 eq	6.97E+0	1.90E-2	1.46E-4	6.99E+0	7.50E-2	2.77E+0	2.55E-2	-3.69E+0	6.17E+0
GWP-b	kg CO2 eq	-1.04E+0	1.16E-5	-1.54E-6	-1.04E+0	4.55E-5	1.20E+0	3.18E-5	2.43E-1	4.05E-1
GWP-luluc	kg CO2 eq	6.99E-3	6.74E-6	1.49E-7	6.99E-3	2.65E-5	9.19E-4	6.18E-7	-4.41E-3	3.52E-3
ODP	kg CFC11 eq	3.31E-6	4.39E-9	8.26E-12	3.31E-6	1.73E-8	2.56E-7	9.22E-10	-1.56E-6	2.02E-6
AP	mol H+ eq	3.23E-2	1.08E-4	1.47E-6	3.25E-2	4.27E-4	4.45E-3	2.23E-5	-1.41E-2	2.32E-2
EP-fw	kg P eq	2.95E-4	1.57E-7	8.24E-9	2.95E-4	6.17E-7	3.08E-5	2.85E-8	-1.42E-4	1.84E-4
EP-m	kg N eq	5.69E-3	3.88E-5	1.55E-7	5.73E-3	1.53E-4	1.11E-3	1.65E-5	-2.64E-3	4.37E-3
EP-T	mol N eq	6.12E-2	4.27E-4	1.85E-6	6.17E-2	1.68E-3	1.22E-2	8.93E-5	-2.87E-2	4.69E-2
POCP	kg NMVOC eq	2.17E-2	1.22E-4	6.28E-7	2.18E-2	4.81E-4	3.63E-3	3.09E-5	-9.76E-3	1.62E-2
ADP-mm	kg Sb eq	4.18E-4	4.92E-7	1.97E-8	4.19E-4	1.94E-6	1.72E-5	2.21E-8	-7.38E-5	3.64E-4
ADP-f	MJ	1.75E+2	2.92E-1	1.36E-3	1.76E+2	1.15E+0	1.18E+1	6.73E-2	-8.64E+1	1.02E+2
WDP	m3 depriv.	9.91E+0	8.97E-4	5.22E-5	9.91E+0	3.53E-3	4.68E-1	3.13E-4	-4.79E+0	5.59E+0
PM	disease inc.	2.63E-7	1.72E-9	9.08E-12	2.65E-7	6.77E-9	5.42E-8	4.63E-10	-1.21E-7	2.05E-7
IR	kBq U-235 eq	3.80E-1	1.28E-3	1.02E-6	3.82E-1	5.03E-3	4.17E-2	3.12E-4	-1.67E-1	2.62E-1
ETP-fw	CTUe	1.51E+2	2.37E-1	1.21E-2	1.51E+2	9.35E-1	9.14E+1	1.01E+0	-6.75E+1	1.77E+2
HTP-c	CTUh	4.84E-9	8.44E-12	6.17E-13	4.85E-9	3.33E-11	1.26E-9	1.77E-12	-2.16E-9	3.99E-9
HTP-nc	CTUh	1.45E-7	2.83E-10	1.57E-11	1.45E-7	1.11E-9	3.17E-8	1.95E-10	-6.39E-8	1.14E-7
SQP	Pt	1.24E+2	2.50E-1	2.24E-3	1.25E+2	9.85E-1	7.18E+0	1.73E-1	-1.33E+2	2.34E-2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.86E+1	4.19E-3	2.40E-2	3.86E+1	1.65E-2	8.46E-1	2.62E-3	-2.35E+1	1.60E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.86E+1	4.19E-3	2.40E-2	3.86E+1	1.65E-2	8.46E-1	2.62E-3	-2.35E+1	1.60E+1
PENRE	MJ	1.88E+2	3.10E-1	1.44E-3	1.88E+2	1.22E+0	1.25E+1	7.14E-2	-9.32E+1	1.09E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.88E+2	3.10E-1	1.44E-3	1.88E+2	1.22E+0	1.25E+1	7.14E-2	-9.32E+1	1.09E+2
PET	MJ	2.27E+2	3.14E-1	2.55E-2	2.27E+2	1.24E+0	1.34E+1	7.40E-2	-1.17E+2	1.25E+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	1.16E-1	3.31E-5	1.46E-6	1.16E-1	1.30E-4	1.35E-2	8.31E-5	-5.78E-2	7.19E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.41E-4	7.47E-7	2.73E-13	1.41E-4	2.94E-6	1.97E-5	8.08E-8	-7.62E-5	8.79E-5
NHWD	kg	6.96E-1	1.81E-2	1.05E-6	7.14E-1	7.13E-2	4.43E-1	2.97E-1	-2.97E-1	1.23E+0
RWD	kg	3.66E-4	1.99E-6	1.10E-13	3.68E-4	7.83E-6	4.49E-5	4.40E-7	-1.52E-4	2.69E-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



Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
<https://www.ecochain.com>
+31 20 3035 777