

Environmental Profile

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

Ecochain v3.5.80



Product: 3000024 - X-Stream Click Inlet 160SW/500 FR 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	5.70E+0	1.92E-2	1.45E-4	5.72E+0	7.18E-2	3.90E+0	2.45E-2	-3.32E+0	6.39E+0
GWP-f	kg CO2 eq	6.74E+0	1.92E-2	1.46E-4	6.76E+0	7.18E-2	2.70E+0	2.45E-2	-3.56E+0	5.99E+0
GWP-b	kg CO2 eq	-1.04E+0	1.16E-5	-1.54E-6	-1.04E+0	4.36E-5	1.20E+0	3.05E-5	2.44E-1	4.03E-1
GWP-luluc	kg CO2 eq	6.81E-3	6.78E-6	1.49E-7	6.81E-3	2.54E-5	8.78E-4	5.93E-7	-4.33E-3	3.39E-3
ODP	kg CFC11 eq	3.16E-6	4.42E-9	8.26E-12	3.17E-6	1.65E-8	2.44E-7	8.84E-10	-1.50E-6	1.93E-6
AP	mol H+ eq	3.13E-2	1.09E-4	1.47E-6	3.14E-2	4.09E-4	4.26E-3	2.14E-5	-1.36E-2	2.25E-2
EP-fw	kg P eq	2.84E-4	1.58E-7	8.24E-9	2.84E-4	5.91E-7	2.94E-5	2.73E-8	-1.37E-4	1.77E-4
EP-m	kg N eq	5.52E-3	3.91E-5	1.55E-7	5.56E-3	1.46E-4	1.06E-3	1.59E-5	-2.55E-3	4.23E-3
EP-T	mol N eq	5.94E-2	4.30E-4	1.85E-6	5.98E-2	1.61E-3	1.17E-2	8.57E-5	-2.78E-2	4.54E-2
POCP	kg NMVOC eq	2.11E-2	1.23E-4	6.28E-7	2.12E-2	4.61E-4	3.48E-3	2.96E-5	-9.44E-3	1.57E-2
ADP-mm	kg Sb eq	4.11E-4	4.96E-7	1.97E-8	4.11E-4	1.86E-6	1.65E-5	2.12E-8	-7.10E-5	3.59E-4
ADP-f	MJ	1.70E+2	2.94E-1	1.36E-3	1.70E+2	1.10E+0	1.13E+1	6.45E-2	-8.33E+1	9.90E+1
WDP	m3 depriv.	9.50E+0	9.03E-4	5.22E-5	9.50E+0	3.38E-3	4.47E-1	3.00E-4	-4.60E+0	5.36E+0
PM	disease inc.	2.56E-7	1.73E-9	9.08E-12	2.58E-7	6.48E-9	5.20E-8	4.44E-10	-1.18E-7	1.99E-7
IR	kBq U-235 eq	3.67E-1	1.29E-3	1.02E-6	3.69E-1	4.82E-3	3.99E-2	3.00E-4	-1.60E-1	2.53E-1
ETP-fw	CTUe	1.47E+2	2.39E-1	1.21E-2	1.47E+2	8.95E-1	8.72E+1	9.61E-1	-6.56E+1	1.70E+2
HTP-c	CTUh	4.67E-9	8.50E-12	6.17E-13	4.68E-9	3.18E-11	1.21E-9	1.70E-12	-2.09E-9	3.83E-9
HTP-nc	CTUh	1.39E-7	2.85E-10	1.57E-11	1.39E-7	1.07E-9	3.03E-8	1.86E-10	-6.14E-8	1.10E-7
SQP	Pt	1.24E+2	2.52E-1	2.24E-3	1.24E+2	9.43E-1	6.87E+0	1.66E-1	-1.33E+2	-7.64E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.74E+1	4.22E-3	2.40E-2	3.74E+1	1.58E-2	8.08E-1	2.52E-3	-2.33E+1	1.49E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.74E+1	4.22E-3	2.40E-2	3.74E+1	1.58E-2	8.08E-1	2.52E-3	-2.33E+1	1.49E+1
PENRE	MJ	1.82E+2	3.12E-1	1.44E-3	1.82E+2	1.17E+0	1.20E+1	6.84E-2	-8.98E+1	1.06E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.82E+2	3.12E-1	1.44E-3	1.82E+2	1.17E+0	1.20E+1	6.84E-2	-8.98E+1	1.06E+2
PET	MJ	2.19E+2	3.17E-1	2.55E-2	2.19E+2	1.19E+0	1.28E+1	7.09E-2	-1.13E+2	1.20E+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	1.12E-1	3.33E-5	1.46E-6	1.12E-1	1.25E-4	1.29E-2	7.96E-5	-5.58E-2	6.93E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.36E-4	7.52E-7	2.73E-13	1.36E-4	2.82E-6	1.88E-5	7.75E-8	-7.36E-5	8.45E-5
NHWD	kg	6.74E-1	1.82E-2	1.05E-6	6.92E-1	6.83E-2	4.25E-1	2.84E-1	-2.86E-1	1.18E+0
RWD	kg	3.54E-4	2.00E-6	1.10E-13	3.56E-4	7.49E-6	4.30E-5	4.21E-7	-1.46E-4	2.61E-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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