

Environmental Profile

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

Ecochain v3.5.80



Product: 3031585 - X-Stream Click Inlet 160SW/600U HI BK NG
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	5.47E+0	1.92E-2	1.45E-4	5.49E+0	6.88E-2	3.82E+0	2.35E-2	-3.19E+0	6.20E+0
GWP-f	kg CO2 eq	6.51E+0	1.92E-2	1.46E-4	6.53E+0	6.87E-2	2.62E+0	2.35E-2	-3.43E+0	5.80E+0
GWP-b	kg CO2 eq	-1.05E+0	1.16E-5	-1.54E-6	-1.05E+0	4.17E-5	1.20E+0	2.92E-5	2.45E-1	4.02E-1
GWP-luluc	kg CO2 eq	6.63E-3	6.78E-6	1.49E-7	6.64E-3	2.43E-5	8.38E-4	5.69E-7	-4.24E-3	3.26E-3
ODP	kg CFC11 eq	3.03E-6	4.42E-9	8.26E-12	3.03E-6	1.58E-8	2.33E-7	8.48E-10	-1.43E-6	1.85E-6
AP	mol H+ eq	3.03E-2	1.09E-4	1.47E-6	3.04E-2	3.91E-4	4.08E-3	2.05E-5	-1.31E-2	2.18E-2
EP-fw	kg P eq	2.74E-4	1.58E-7	8.24E-9	2.74E-4	5.65E-7	2.81E-5	2.62E-8	-1.32E-4	1.70E-4
EP-m	kg N eq	5.35E-3	3.91E-5	1.55E-7	5.39E-3	1.40E-4	1.02E-3	1.53E-5	-2.47E-3	4.09E-3
EP-T	mol N eq	5.76E-2	4.30E-4	1.85E-6	5.80E-2	1.54E-3	1.13E-2	8.22E-5	-2.69E-2	4.40E-2
POCP	kg NMVOC eq	2.04E-2	1.23E-4	6.28E-7	2.05E-2	4.41E-4	3.34E-3	2.85E-5	-9.13E-3	1.52E-2
ADP-mm	kg Sb eq	4.05E-4	4.96E-7	1.97E-8	4.06E-4	1.78E-6	1.58E-5	2.03E-8	-6.84E-5	3.55E-4
ADP-f	MJ	1.64E+2	2.94E-1	1.36E-3	1.64E+2	1.05E+0	1.08E+1	6.19E-2	-8.01E+1	9.56E+1
WDP	m3 depriv.	9.10E+0	9.03E-4	5.22E-5	9.11E+0	3.24E-3	4.27E-1	2.88E-4	-4.41E+0	5.13E+0
PM	disease inc.	2.50E-7	1.73E-9	9.08E-12	2.52E-7	6.20E-9	4.98E-8	4.25E-10	-1.15E-7	1.93E-7
IR	kBq U-235 eq	3.54E-1	1.29E-3	1.02E-6	3.56E-1	4.61E-3	3.82E-2	2.87E-4	-1.54E-1	2.44E-1
ETP-fw	CTUe	1.43E+2	2.39E-1	1.21E-2	1.43E+2	8.57E-1	8.33E+1	9.17E-1	-6.38E+1	1.65E+2
HTP-c	CTUh	4.53E-9	8.50E-12	6.17E-13	4.54E-9	3.05E-11	1.16E-9	1.63E-12	-2.02E-9	3.71E-9
HTP-nc	CTUh	1.34E-7	2.85E-10	1.57E-11	1.34E-7	1.02E-9	2.90E-8	1.78E-10	-5.90E-8	1.06E-7
SQP	Pt	1.23E+2	2.52E-1	2.24E-3	1.23E+2	9.02E-1	6.58E+0	1.59E-1	-1.32E+2	-1.45E+0
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	1.51E-2	7.72E-1	2.41E-3	-2.32E+1	1.50E+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	1.51E-2	7.72E-1	2.41E-3	-2.32E+1	1.50E+1
PENRE	MJ	1.75E+2	3.12E-1	1.44E-3	1.76E+2	1.12E+0	1.15E+1	6.56E-2	-8.64E+1	1.02E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.75E+2	3.12E-1	1.44E-3	1.76E+2	1.12E+0	1.15E+1	6.56E-2	-8.64E+1	1.02E+2
PET	MJ	2.13E+2	3.17E-1	2.55E-2	2.13E+2	1.14E+0	1.22E+1	6.81E-2	-1.10E+2	1.17E+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	1.08E-1	3.33E-5	1.46E-6	1.08E-1	1.19E-4	1.23E-2	7.64E-5	-5.38E-2	6.66E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.31E-4	7.52E-7	2.73E-13	1.32E-4	2.70E-6	1.81E-5	7.43E-8	-7.10E-5	8.14E-5
NHWD	kg	6.52E-1	1.82E-2	1.05E-6	6.70E-1	6.54E-2	4.08E-1	2.73E-1	-2.76E-1	1.14E+0
RWD	kg	3.43E-4	2.00E-6	1.10E-13	3.45E-4	7.17E-6	4.12E-5	4.04E-7	-1.41E-4	2.53E-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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