

Environmental Profile

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

Ecochain v3.5.80



Product: 3011247 - X-Stream Click Inlet 160SW/800 VI BK
Unit: 1 piece
Manufacturer: Wavin - PL -Buk - Extra products

Wavin X-Stream is a new generation of double-walled pipes and fittings made of polypropylene. The system is

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



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]

Statement of Confidentiality

This document and supporting material contain confidential and proprietary business information of Wavin - PL -Buk - Extra products. These materials may be printed or (photo) copied or otherwise used only with the written consent of Wavin - PL -Buk - Extra products.

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	5.39E+0	1.41E-2	1.45E-4	5.41E+0	6.81E-2	3.78E+0	2.33E-2	-3.15E+0	6.13E+0
GWP-f	kg CO2 eq	6.43E+0	1.41E-2	1.46E-4	6.45E+0	6.80E-2	2.58E+0	2.33E-2	-3.39E+0	5.73E+0
GWP-b	kg CO2 eq	-1.05E+0	8.56E-6	-1.54E-6	-1.05E+0	4.13E-5	1.20E+0	2.89E-5	2.45E-1	4.02E-1
GWP-luluc	kg CO2 eq	6.57E-3	4.99E-6	1.49E-7	6.58E-3	2.41E-5	8.29E-4	5.63E-7	-4.22E-3	3.21E-3
ODP	kg CFC11 eq	2.99E-6	3.25E-9	8.26E-12	3.00E-6	1.57E-8	2.31E-7	8.39E-10	-1.41E-6	1.83E-6
AP	mol H+ eq	3.00E-2	8.03E-5	1.47E-6	3.01E-2	3.87E-4	4.04E-3	2.03E-5	-1.30E-2	2.15E-2
EP-fw	kg P eq	2.71E-4	1.16E-7	8.24E-9	2.71E-4	5.60E-7	2.78E-5	2.59E-8	-1.31E-4	1.68E-4
EP-m	kg N eq	5.29E-3	2.87E-5	1.55E-7	5.32E-3	1.39E-4	1.01E-3	1.52E-5	-2.45E-3	4.04E-3
EP-T	mol N eq	5.70E-2	3.17E-4	1.85E-6	5.73E-2	1.53E-3	1.11E-2	8.14E-5	-2.67E-2	4.34E-2
POCP	kg NMVOC eq	2.02E-2	9.05E-5	6.28E-7	2.03E-2	4.37E-4	3.31E-3	2.82E-5	-9.05E-3	1.50E-2
ADP-mm	kg Sb eq	4.04E-4	3.65E-7	1.97E-8	4.05E-4	1.76E-6	1.56E-5	2.01E-8	-6.77E-5	3.54E-4
ADP-f	MJ	1.62E+2	2.16E-1	1.36E-3	1.62E+2	1.04E+0	1.07E+1	6.13E-2	-7.92E+1	9.44E+1
WDP	m3 depriv.	9.00E+0	6.64E-4	5.22E-5	9.00E+0	3.20E-3	4.22E-1	2.85E-4	-4.36E+0	5.06E+0
PM	disease inc.	2.48E-7	1.27E-9	9.08E-12	2.49E-7	6.14E-9	4.92E-8	4.21E-10	-1.14E-7	1.91E-7
IR	kBq U-235 eq	3.51E-1	9.46E-4	1.02E-6	3.52E-1	4.56E-3	3.78E-2	2.85E-4	-1.53E-1	2.42E-1
ETP-fw	CTUe	1.42E+2	1.76E-1	1.21E-2	1.42E+2	8.48E-1	8.23E+1	9.07E-1	-6.34E+1	1.63E+2
HTP-c	CTUh	4.50E-9	6.25E-12	6.17E-13	4.51E-9	3.02E-11	1.15E-9	1.61E-12	-2.00E-9	3.68E-9
HTP-nc	CTUh	1.33E-7	2.09E-10	1.57E-11	1.33E-7	1.01E-9	2.87E-8	1.76E-10	-5.85E-8	1.05E-7
SQP	Pt	1.23E+2	1.85E-1	2.24E-3	1.23E+2	8.93E-1	6.50E+0	1.57E-1	-1.32E+2	-1.71E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.77E+1	3.10E-3	2.40E-2	3.77E+1	1.50E-2	7.64E-1	2.39E-3	-2.32E+1	1.53E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.77E+1	3.10E-3	2.40E-2	3.77E+1	1.50E-2	7.64E-1	2.39E-3	-2.32E+1	1.53E+1
PENRE	MJ	1.73E+2	2.30E-1	1.44E-3	1.74E+2	1.11E+0	1.13E+1	6.50E-2	-8.54E+1	1.01E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.73E+2	2.30E-1	1.44E-3	1.74E+2	1.11E+0	1.13E+1	6.50E-2	-8.54E+1	1.01E+2
PET	MJ	2.11E+2	2.33E-1	2.55E-2	2.11E+2	1.12E+0	1.21E+1	6.74E-2	-1.09E+2	1.16E+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	1.07E-1	2.45E-5	1.46E-6	1.07E-1	1.18E-4	1.22E-2	7.56E-5	-5.33E-2	6.56E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.30E-4	5.53E-7	2.73E-13	1.30E-4	2.67E-6	1.79E-5	7.36E-8	-7.02E-5	8.07E-5
NHWD	kg	6.46E-1	1.34E-2	1.05E-6	6.59E-1	6.47E-2	4.03E-1	2.70E-1	-2.74E-1	1.12E+0
RWD	kg	3.40E-4	1.47E-6	1.10E-13	3.41E-4	7.10E-6	4.07E-5	4.00E-7	-1.40E-4	2.50E-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