

Environmental Profile

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

Ecochain v3.5.80



Product: 3043168 - X-Stream PP Reducer BK 250x150
 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

A1 Raw material supply A2 Transport A3 Manufacturing

Construction process stage

A4 Transport gate to site
 A5 Assembly / Construction installation process

Use stage

B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment
 B6 Operational energy use B7 Operational water use

End-of-Life stage

C1 De-construction demolition C2 Transport C3 Waste processing
 C4 Disposal

Benefits and loads beyond the system boundaries

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	1.99E+0	8.56E-2	4.54E-3	2.08E+0	2.73E-2	1.22E+0	1.28E-2	-1.30E+0	2.05E+0
GWP-f	kg CO2 eq	2.36E+0	8.55E-2	4.59E-3	2.45E+0	2.73E-2	8.33E-1	1.29E-2	-1.29E+0	2.03E+0
GWP-b	kg CO2 eq	-3.73E-1	5.19E-5	-4.84E-5	-3.73E-1	1.66E-5	3.91E-1	1.12E-5	-4.50E-3	1.32E-2
GWP-luluc	kg CO2 eq	8.55E-4	3.03E-5	4.69E-6	8.90E-4	9.65E-6	1.54E-4	2.19E-7	-3.11E-4	7.43E-4
ODP	kg CFC11 eq	7.81E-8	1.97E-8	2.59E-10	9.81E-8	6.28E-9	2.05E-8	3.22E-10	-5.98E-8	6.55E-8
AP	mol H+ eq	8.67E-3	4.87E-4	4.63E-5	9.20E-3	1.55E-4	8.81E-4	7.69E-6	-3.77E-3	6.48E-3
EP-fw	kg P eq	3.75E-5	7.04E-7	2.58E-7	3.85E-5	2.24E-7	4.47E-6	1.00E-8	-1.51E-5	2.81E-5
EP-m	kg N eq	1.50E-3	1.74E-4	4.87E-6	1.68E-3	5.56E-5	2.62E-4	5.07E-6	-6.88E-4	1.31E-3
EP-T	mol N eq	1.72E-2	1.92E-3	5.82E-5	1.92E-2	6.13E-4	2.89E-3	3.12E-5	-7.87E-3	1.49E-2
POCP	kg NMVOC eq	7.39E-3	5.49E-4	1.97E-5	7.96E-3	1.75E-4	9.05E-4	1.17E-5	-3.38E-3	5.68E-3
ADP-mm	kg Sb eq	4.45E-5	2.21E-6	6.17E-7	4.73E-5	7.05E-7	3.37E-6	7.75E-9	-8.77E-6	4.26E-5
ADP-f	MJ	7.90E+1	1.31E+0	4.26E-2	8.04E+1	4.19E-1	2.70E+0	2.35E-2	-4.02E+1	4.33E+1
WDP	m3 depriv.	1.53E+0	4.03E-3	1.64E-3	1.54E+0	1.28E-3	5.26E-2	1.18E-4	-7.11E-1	8.79E-1
PM	disease inc.	9.34E-8	7.72E-9	2.85E-10	1.01E-7	2.46E-9	1.42E-8	1.62E-10	-3.29E-8	8.54E-8
IR	kBq U-235 eq	4.93E-2	5.74E-3	3.19E-5	5.51E-2	1.83E-3	8.18E-3	1.09E-4	-1.97E-2	4.55E-2
ETP-fw	CTUe	1.67E+1	1.07E+0	3.79E-1	1.82E+1	3.40E-1	3.06E+0	1.99E-2	-6.75E+0	1.48E+1
HTP-c	CTUh	8.33E-10	3.79E-11	1.94E-11	8.90E-10	1.21E-11	3.94E-10	5.75E-13	-2.44E-10	1.05E-9
HTP-nc	CTUh	1.90E-8	1.27E-9	4.91E-10	2.08E-8	4.05E-10	4.62E-9	1.27E-11	-6.95E-9	1.89E-8
SQP	Pt	3.97E+1	1.12E+0	7.03E-2	4.09E+1	3.58E-1	2.16E+0	6.04E-2	-8.72E+0	3.47E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.04E+1	1.88E-2	7.54E-1	1.12E+1	6.01E-3	1.32E-1	9.13E-4	-2.04E+0	9.32E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.04E+1	1.88E-2	7.54E-1	1.12E+1	6.01E-3	1.32E-1	9.13E-4	-2.04E+0	9.32E+0
PENRE	MJ	8.48E+1	1.39E+0	4.53E-2	8.62E+1	4.44E-1	2.88E+0	2.50E-2	-4.34E+1	4.62E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	8.48E+1	1.39E+0	4.53E-2	8.62E+1	4.44E-1	2.88E+0	2.50E-2	-4.34E+1	4.62E+1
PET	MJ	9.53E+1	1.41E+0	8.00E-1	9.75E+1	4.50E-1	3.01E+0	2.59E-2	-4.54E+1	5.55E+1
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	2.39E-2	1.49E-4	4.58E-5	2.41E-2	4.74E-5	1.59E-3	2.90E-5	-1.06E-2	1.52E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.70E-5	3.36E-6	8.57E-12	2.04E-5	1.07E-6	4.43E-6	2.84E-8	-1.02E-5	1.57E-5
NHWD	kg	1.27E-1	8.13E-2	3.31E-5	2.09E-1	2.59E-2	1.40E-1	1.04E-1	-3.51E-2	4.43E-1
RWD	kg	4.79E-5	8.93E-6	3.44E-12	5.68E-5	2.85E-6	1.04E-5	1.54E-7	-1.79E-5	5.23E-5
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