

Environmental Profile

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

Ecochain v3.5.64



Product: 3071005 - X-STREAM PP DBL.SOCKE COUPLER BK 250 Nor
 Unit: 1 Piece
 Manufacturer: Wavin Poland Buk
 Address: Dobieżyńska 43
 64-320 Buk
 Poland
 Contact: <https://www.wavin.com/en-en>

LCA standard: EN15804+A2 (2019)
 Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
 Externally verified: Yes
 Issue date: 19-09-2022
 End of validity: 19-09-2027
 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 Wavin X-Stream system is a new generation of profiled pipe system with ring stiffness of SN 8, outside black and inside bright for drainage of foul water and storm water. The Wavin X-Stream structured wall polypropylene (PP) pipes systems incorporate a unique new design for fast, secure assembly.

The LCA background information and project dossier have been registered in the online Ecochain application in the account Wavin Poland Buk (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 Climate Change [kg CO2 eq]; **GWP-f** = EF Climate change - Fossil [kg CO2 eq]; **GWP-b** = EF Climate Change - Biogenic [kg CO2 eq]; **GWP-luluc** = EF 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	5.78E-1	1.05E-1	1.40E-1	8.24E-1	3.65E-2	4.18E+0	1.72E-2	-2.21E+0	2.85E+0
GWP-f	kg CO2 eq	3.63E+0	1.05E-1	1.35E-1	3.87E+0	3.65E-2	1.09E+0	1.72E-2	-2.20E+0	2.82E+0
GWP-b	kg CO2 eq	-3.06E+0	4.85E-5	5.12E-3	-3.05E+0	2.22E-5	3.09E+0	1.50E-5	-6.03E-3	2.59E-2
GWP-luluc	kg CO2 eq	8.22E-3	3.85E-5	7.23E-5	8.33E-3	1.29E-5	2.18E-4	2.96E-7	-3.70E-3	4.87E-3
ODP	kg CFC11 eq	1.29E-7	2.32E-8	1.46E-8	1.67E-7	8.41E-9	3.23E-8	4.32E-10	-1.42E-7	6.61E-8
AP	mol H+ eq	1.63E-2	6.10E-4	7.59E-4	1.76E-2	2.08E-4	1.34E-3	1.03E-5	-8.60E-3	1.06E-2
EP-fw	kg P eq	1.21E-4	1.06E-6	3.96E-6	1.26E-4	3.00E-7	6.40E-6	1.35E-8	-6.21E-5	7.05E-5
EP-m	kg N eq	3.23E-3	2.15E-4	9.77E-5	3.54E-3	7.44E-5	4.11E-4	6.68E-6	-1.83E-3	2.20E-3
EP-T	mol N eq	3.49E-2	2.37E-3	1.11E-3	3.84E-2	8.20E-4	4.53E-3	4.19E-5	-2.09E-2	2.28E-2
POCP	kg NMVOC eq	1.34E-2	6.76E-4	3.74E-4	1.44E-2	2.34E-4	1.41E-3	1.57E-5	-8.01E-3	8.06E-3
ADP-mm	kg Sb eq	5.39E-5	2.66E-6	8.69E-6	6.53E-5	9.45E-7	5.21E-6	1.04E-8	-1.98E-5	5.16E-5
ADP-f	MJ	1.11E+2	1.59E+0	1.58E+0	1.14E+2	5.60E-1	3.95E+0	3.15E-2	-6.19E+1	5.64E+1
WDP	m3 depriv.	2.42E+0	5.67E-3	2.52E-2	2.45E+0	1.72E-3	7.28E-2	1.71E-4	-1.47E+0	1.05E+0
PM	disease inc.	1.86E-7	9.44E-9	5.15E-9	2.01E-7	3.30E-9	2.15E-8	2.17E-10	-1.17E-7	1.09E-7
IR	kBq U-235 eq	8.60E-2	6.64E-3	2.21E-3	9.48E-2	2.45E-3	1.25E-2	1.46E-4	-6.15E-2	4.84E-2
ETP-fw	CTUe	4.00E+1	1.41E+0	5.68E+0	4.70E+1	4.55E-1	4.65E+0	2.64E-2	-4.00E+1	1.22E+1
HTP-c	CTUh	2.07E-9	4.59E-11	2.86E-10	2.40E-9	1.62E-11	5.76E-10	7.80E-13	-1.45E-9	1.55E-9
HTP-nc	CTUh	3.41E-8	1.55E-9	7.10E-9	4.28E-8	5.43E-10	6.69E-9	1.70E-11	-2.26E-8	2.74E-8
SQP	Pt	2.53E+2	1.38E+0	1.08E+0	2.56E+2	4.79E-1	3.08E+0	8.09E-2	-2.48E+2	1.18E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.92E+1	1.99E-2	1.05E+1	4.97E+1	8.04E-3	1.89E-1	1.21E-3	-3.93E+1	1.06E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.92E+1	1.99E-2	1.05E+1	4.97E+1	8.04E-3	1.89E-1	1.21E-3	-3.93E+1	1.06E+1
PENRE	MJ	1.19E+2	1.68E+0	1.71E+0	1.22E+2	5.95E-1	4.21E+0	3.35E-2	-6.66E+1	6.02E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.19E+2	1.68E+0	1.71E+0	1.22E+2	5.95E-1	4.21E+0	3.35E-2	-6.66E+1	6.02E+1
PET	MJ	1.58E+2	1.70E+0	1.22E+1	1.72E+2	6.03E-1	4.40E+0	3.47E-2	-1.06E+2	7.08E+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	4.51E-2	1.93E-4	7.12E-4	4.60E-2	6.34E-5	2.25E-3	3.88E-5	-2.81E-2	2.02E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.87E-5	4.02E-6	1.50E-6	4.43E-5	1.43E-6	6.79E-6	3.81E-8	-3.12E-5	2.13E-5
NHWD	kg	2.88E-1	1.01E-1	4.18E-3	3.93E-1	3.47E-2	1.94E-1	1.39E-1	-1.73E-1	5.87E-1
RWD	kg	8.35E-5	1.04E-5	2.77E-6	9.67E-5	3.81E-6	1.61E-5	2.06E-7	-6.12E-5	5.56E-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