

# Environmental Profile

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

Ecochain v3.5.64



Product: 3010948 - X-Stream PP Dbl.Socket Coupler BK 600  
 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	☑	☑	☑	☑
<b>Product stage</b>					<b>Use stage</b>							<b>End-of-Life stage</b>				
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				
<b>Construction process stage</b>					<b>Benefits and loads beyond the system boundaries</b>											
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]

## Statement of Confidentiality

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# Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.22E+1	6.71E-1	8.40E-1	1.38E+1	3.16E-1	2.33E+1	1.49E-1	-1.65E+1	2.11E+1
GWP-f	kg CO2 eq	2.63E+1	6.70E-1	7.91E-1	2.77E+1	3.16E-1	9.22E+0	1.49E-1	-1.64E+1	2.10E+1
GWP-b	kg CO2 eq	-1.40E+1	3.09E-4	4.84E-2	-1.40E+1	1.92E-4	1.41E+1	1.30E-4	-5.22E-2	9.36E-2
GWP-luluc	kg CO2 eq	1.39E-2	2.46E-4	2.37E-4	1.44E-2	1.12E-4	1.80E-3	2.57E-6	-9.66E-3	6.63E-3
ODP	kg CFC11 eq	7.11E-7	1.48E-7	1.05E-7	9.64E-7	7.28E-8	2.39E-7	3.74E-9	-8.89E-7	3.90E-7
AP	mol H+ eq	1.00E-1	3.89E-3	2.73E-3	1.07E-1	1.80E-3	1.01E-2	8.93E-5	-5.38E-2	6.53E-2
EP-fw	kg P eq	4.58E-4	6.76E-6	1.29E-5	4.77E-4	2.60E-6	5.21E-5	1.17E-7	-2.57E-4	2.75E-4
EP-m	kg N eq	1.80E-2	1.37E-3	4.43E-4	1.98E-2	6.44E-4	2.97E-3	5.78E-5	-1.07E-2	1.28E-2
EP-T	mol N eq	2.04E-1	1.51E-2	4.80E-3	2.24E-1	7.10E-3	3.28E-2	3.62E-4	-1.21E-1	1.44E-1
POCP	kg NMVOC eq	9.07E-2	4.31E-3	1.61E-3	9.66E-2	2.03E-3	1.03E-2	1.36E-4	-5.15E-2	5.75E-2
ADP-mm	kg Sb eq	4.02E-4	1.70E-5	2.40E-5	4.43E-4	8.18E-6	3.92E-5	9.03E-8	-1.33E-4	3.58E-4
ADP-f	MJ	8.92E+2	1.01E+1	1.02E+1	9.12E+2	4.85E+0	3.14E+1	2.73E-1	-4.91E+2	4.57E+2
WDP	m3 depriv.	1.76E+1	3.62E-2	8.22E-2	1.77E+1	1.49E-2	6.08E-1	1.48E-3	-8.75E+0	9.57E+0
PM	disease inc.	1.05E-6	6.02E-8	2.10E-8	1.13E-6	2.85E-8	1.64E-7	1.88E-9	-5.97E-7	7.28E-7
IR	kBq U-235 eq	5.46E-1	4.24E-2	1.65E-2	6.05E-1	2.12E-2	9.58E-2	1.26E-3	-3.14E-1	4.10E-1
ETP-fw	CTUe	1.85E+2	9.01E+0	1.77E+1	2.12E+2	3.94E+0	3.53E+1	2.29E-1	-1.14E+2	1.37E+2
HTP-c	CTUh	1.20E-8	2.92E-10	8.74E-10	1.32E-8	1.40E-10	4.46E-9	6.75E-12	-7.61E-9	1.02E-8
HTP-nc	CTUh	2.05E-7	9.86E-9	2.07E-8	2.35E-7	4.70E-9	5.30E-8	1.48E-10	-1.15E-7	1.78E-7
SQP	Pt	1.21E+3	8.77E+0	3.49E+0	1.22E+3	4.15E+0	2.50E+1	7.00E-1	-1.00E+3	2.49E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.83E+2	1.27E-1	2.82E+1	2.12E+2	6.96E-2	1.55E+0	1.05E-2	-1.54E+2	5.89E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.83E+2	1.27E-1	2.82E+1	2.12E+2	6.96E-2	1.55E+0	1.05E-2	-1.54E+2	5.89E+1
PENRE	MJ	9.57E+2	1.07E+1	1.10E+1	9.78E+2	5.15E+0	3.35E+1	2.90E-1	-5.29E+2	4.88E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	9.57E+2	1.07E+1	1.10E+1	9.78E+2	5.15E+0	3.35E+1	2.90E-1	-5.29E+2	4.88E+2
PET	MJ	1.14E+3	1.09E+1	3.92E+1	1.19E+3	5.22E+0	3.50E+1	3.00E-1	-6.84E+2	5.47E+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	2.75E-1	1.23E-3	2.36E-3	2.79E-1	5.49E-4	1.82E-2	3.36E-4	-1.37E-1	1.60E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.99E-4	2.56E-5	1.30E-5	2.38E-4	1.24E-5	5.14E-5	3.30E-7	-1.86E-4	1.16E-4
NHWD	kg	1.63E+0	6.41E-1	3.35E-2	2.30E+0	3.01E-1	1.54E+0	1.20E+0	-9.19E-1	4.43E+0
RWD	kg	5.08E-4	6.64E-5	2.40E-5	5.98E-4	3.30E-5	1.22E-4	1.78E-6	-3.07E-4	4.47E-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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