

Environmental Profile

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

Ecochain v3.5.80



Product: 3038977 - XS PP PipeDrain 220 BK 200 SN8 L=6 S/SP
Unit: 1 piece
Manufacturer: Wavin - PL -Buk - Extra products

Drainage made of double-walled Wavin X-Stream pipes and fittings are high-strength SN8 products in the diameter range DN/ID 100 – 800 mm. Efficient drainage is ensured by 1.5 mm wide longitudinal slots, and their area is not less than 50 cm2/m of pipe. Thanks to the availability of pipes in three types of perforation (TP, LP and MP), the drainage system can be easily adapted to the investment conditions.

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]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.42E+1	1.74E+0	5.44E-3	2.60E+1	3.72E-1	1.75E+1	1.75E-1	-1.75E+1	2.65E+1
GWP-f	kg CO2 eq	3.06E+1	1.74E+0	5.49E-3	3.23E+1	3.72E-1	1.09E+1	1.75E-1	-1.74E+1	2.64E+1
GWP-b	kg CO2 eq	-6.36E+0	1.05E-3	-5.80E-5	-6.36E+0	2.26E-4	6.53E+0	1.53E-4	-6.10E-2	1.08E-1
GWP-luluc	kg CO2 eq	1.16E-2	6.15E-4	5.61E-6	1.22E-2	1.32E-4	2.11E-3	2.98E-6	-4.35E-3	1.01E-2
ODP	kg CFC11 eq	8.88E-7	4.00E-7	3.10E-10	1.29E-6	8.57E-8	2.80E-7	4.40E-9	-7.45E-7	9.14E-7
AP	mol H+ eq	1.13E-1	9.89E-3	5.54E-5	1.23E-1	2.12E-3	1.21E-2	1.05E-4	-5.16E-2	8.58E-2
EP-fw	kg P eq	4.87E-4	1.43E-5	3.09E-7	5.01E-4	3.06E-6	6.09E-5	1.37E-7	-2.04E-4	3.61E-4
EP-m	kg N eq	1.96E-2	3.54E-3	5.83E-6	2.31E-2	7.58E-4	3.60E-3	6.83E-5	-9.46E-3	1.81E-2
EP-T	mol N eq	2.23E-1	3.90E-2	6.97E-5	2.62E-1	8.36E-3	3.97E-2	4.26E-4	-1.09E-1	2.01E-1
POCP	kg NMVOC eq	9.72E-2	1.12E-2	2.36E-5	1.08E-1	2.39E-3	1.24E-2	1.60E-4	-4.63E-2	7.71E-2
ADP-mm	kg Sb eq	4.29E-4	4.49E-5	7.39E-7	4.75E-4	9.63E-6	4.60E-5	1.06E-7	-1.19E-4	4.12E-4
ADP-f	MJ	1.05E+3	2.67E+1	5.10E-2	1.08E+3	5.71E+0	3.69E+1	3.21E-1	-5.45E+2	5.74E+2
WDP	m3 depriv.	2.05E+1	8.18E-2	1.96E-3	2.06E+1	1.75E-2	7.18E-1	1.61E-3	-9.60E+0	1.17E+1
PM	disease inc.	1.27E-6	1.57E-7	3.41E-10	1.43E-6	3.36E-8	1.95E-7	2.21E-9	-4.57E-7	1.20E-6
IR	kBq U-235 eq	6.36E-1	1.17E-1	3.82E-5	7.52E-1	2.50E-2	1.12E-1	1.49E-3	-2.65E-1	6.25E-1
ETP-fw	CTUe	2.12E+2	2.16E+1	4.54E-1	2.34E+2	4.64E+0	4.17E+1	2.69E-1	-9.57E+1	1.85E+2
HTP-c	CTUh	1.05E-8	7.70E-10	2.32E-11	1.13E-8	1.65E-10	5.39E-9	7.84E-12	-3.34E-9	1.35E-8
HTP-nc	CTUh	2.44E-7	2.58E-8	5.88E-10	2.70E-7	5.53E-9	6.29E-8	1.73E-10	-9.53E-8	2.43E-7
SQP	Pt	6.37E+2	2.28E+1	8.42E-2	6.60E+2	4.89E+0	2.94E+1	8.24E-1	-1.42E+2	5.53E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.59E+2	3.82E-1	9.03E-1	1.60E+2	8.19E-2	1.81E+0	1.24E-2	-3.24E+1	1.30E+2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.59E+2	3.82E-1	9.03E-1	1.60E+2	8.19E-2	1.81E+0	1.24E-2	-3.24E+1	1.30E+2
PENRE	MJ	1.13E+3	2.83E+1	5.43E-2	1.15E+3	6.06E+0	3.93E+1	3.41E-1	-5.87E+2	6.13E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.13E+3	2.83E+1	5.43E-2	1.15E+3	6.06E+0	3.93E+1	3.41E-1	-5.87E+2	6.13E+2
PET	MJ	1.28E+3	2.87E+1	9.57E-1	1.31E+3	6.15E+0	4.11E+1	3.53E-1	-6.20E+2	7.42E+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	3.15E-1	3.02E-3	5.48E-5	3.18E-1	6.46E-4	2.18E-2	3.96E-4	-1.43E-1	1.98E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.85E-4	6.82E-5	1.03E-11	2.53E-4	1.46E-5	6.04E-5	3.87E-7	-1.33E-4	1.95E-4
NHWD	kg	1.40E+0	1.65E+0	3.96E-5	3.05E+0	3.54E-1	1.91E+0	1.42E+0	-4.82E-1	6.25E+0
RWD	kg	6.03E-4	1.81E-4	4.12E-12	7.85E-4	3.88E-5	1.42E-4	2.10E-6	-2.41E-4	7.27E-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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