

Environmental Profile

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

Ecochain v3.5.80



Product: 3024615 - X-Stream PP Repair Coupler BK 100
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					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	2.33E-1	6.23E-4	1.45E-4	2.34E-1	3.68E-3	2.88E-1	1.73E-3	-1.93E-1	3.35E-1
GWP-f	kg CO2 eq	3.81E-1	6.23E-4	1.46E-4	3.81E-1	3.68E-3	1.26E-1	1.74E-3	-2.17E-1	2.96E-1
GWP-b	kg CO2 eq	-1.48E-1	3.78E-7	-1.54E-6	-1.48E-1	2.24E-6	1.62E-1	1.51E-6	2.46E-2	3.90E-2
GWP-luluc	kg CO2 eq	4.07E-4	2.20E-7	1.49E-7	4.07E-4	1.30E-6	2.21E-5	2.99E-8	-3.02E-4	1.29E-4
ODP	kg CFC11 eq	1.70E-8	1.43E-10	8.26E-12	1.71E-8	8.48E-10	3.36E-9	4.35E-11	-1.33E-8	8.07E-9
AP	mol H+ eq	1.57E-3	3.55E-6	1.47E-6	1.57E-3	2.10E-5	1.38E-4	1.04E-6	-7.65E-4	9.69E-4
EP-fw	kg P eq	9.12E-6	5.12E-9	8.24E-9	9.14E-6	3.03E-8	6.51E-7	1.37E-9	-5.46E-6	4.36E-6
EP-m	kg N eq	3.00E-4	1.27E-6	1.55E-7	3.01E-4	7.50E-6	4.23E-5	6.73E-7	-1.56E-4	1.95E-4
EP-T	mol N eq	3.27E-3	1.40E-5	1.85E-6	3.28E-3	8.27E-5	4.65E-4	4.22E-6	-1.78E-3	2.06E-3
POCP	kg NMVOC eq	1.31E-3	4.00E-6	6.28E-7	1.32E-3	2.36E-5	1.45E-4	1.58E-6	-6.96E-4	7.93E-4
ADP-mm	kg Sb eq	6.34E-6	1.61E-8	1.97E-8	6.37E-6	9.52E-8	5.41E-7	1.05E-9	-1.71E-6	5.30E-6
ADP-f	MJ	1.17E+1	9.56E-3	1.36E-3	1.17E+1	5.65E-2	4.05E-1	3.18E-3	-6.14E+0	6.04E+0
WDP	m3 depriv.	2.33E-1	2.93E-5	5.22E-5	2.33E-1	1.73E-4	7.39E-3	1.73E-5	-1.43E-1	9.74E-2
PM	disease inc.	1.68E-8	5.62E-11	9.08E-12	1.69E-8	3.32E-10	2.21E-9	2.19E-11	-9.53E-9	9.92E-9
IR	kBq U-235 eq	9.14E-3	4.18E-5	1.02E-6	9.19E-3	2.47E-4	1.29E-3	1.47E-5	-5.34E-3	5.39E-3
ETP-fw	CTUe	7.25E+0	7.76E-3	1.21E-2	7.27E+0	4.59E-2	4.83E-1	2.66E-3	-3.53E+0	4.27E+0
HTP-c	CTUh	2.44E-10	2.76E-13	6.17E-13	2.45E-10	1.63E-12	5.83E-11	7.86E-14	-1.00E-10	2.05E-10
HTP-nc	CTUh	4.69E-9	9.25E-12	1.57E-11	4.72E-9	5.47E-11	6.94E-10	1.72E-12	-1.43E-9	4.04E-9
SQP	Pt	1.42E+1	8.18E-3	2.24E-3	1.42E+1	4.83E-2	3.17E-1	8.16E-3	-1.56E+1	-1.03E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.15E+0	1.37E-4	2.40E-2	4.17E+0	8.11E-4	1.92E-2	1.22E-4	-2.55E+0	1.64E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.15E+0	1.37E-4	2.40E-2	4.17E+0	8.11E-4	1.92E-2	1.22E-4	-2.55E+0	1.64E+0
PENRE	MJ	1.26E+1	1.01E-2	1.44E-3	1.26E+1	6.00E-2	4.31E-1	3.37E-3	-6.61E+0	6.45E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.26E+1	1.01E-2	1.44E-3	1.26E+1	6.00E-2	4.31E-1	3.37E-3	-6.61E+0	6.45E+0
PET	MJ	1.67E+1	1.03E-2	2.55E-2	1.67E+1	6.08E-2	4.50E-1	3.50E-3	-9.16E+0	8.09E+0
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	4.06E-3	1.08E-6	1.46E-6	4.07E-3	6.39E-6	2.28E-4	3.91E-6	-2.67E-3	1.63E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.40E-6	2.44E-8	2.73E-13	3.42E-6	1.45E-7	7.05E-7	3.84E-9	-2.91E-6	1.36E-6
NHWD	kg	2.69E-2	5.92E-4	1.05E-6	2.75E-2	3.50E-3	2.04E-2	1.40E-2	-1.29E-2	5.26E-2
RWD	kg	9.15E-6	6.50E-8	1.10E-13	9.22E-6	3.84E-7	1.66E-6	2.07E-8	-5.21E-6	6.07E-6
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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