

Environmental Profile

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

Ecochain v3.5.71



Product: 3011284 - Hep20 Pb Pipe BI Conduit 10 Barrier L=50
Unit: 1 piece
Manufacturer: Wavin - UK - Doncaster - Verified

LCA standard: EN15804+A2 (2019)
Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified: Yes
Issue date: 09-02-2023
End of validity: 09-02-2028
Verifier: Martijn van Hövell - SGS Search



Suitable for various professional plumbing jobs. Hep20 is packed with unique features that make push-fit plumbing fitting easier quicker and more secure for installers. No additional equipment or tools required when installing or demounting fittings compared to others where a solder or glue is required. Just push the pipework into the fitting to create a watertight seal. A wide range of plastic fittings, plumbing pipes and tubes are available. It is the only system with joint recognition and se



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 - UK - Doncaster - Verified (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]

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	8.67E+0	1.80E-1	1.02E+0	9.88E+0	5.45E-2	4.45E+0	2.38E-2	-5.94E+0	8.46E+0
GWP-f	kg CO2 eq	9.78E+0	1.80E-1	9.49E-1	1.09E+1	5.44E-2	2.45E+0	2.38E-2	-5.04E+0	8.40E+0
GWP-b	kg CO2 eq	-1.11E+0	1.02E-4	7.23E-2	-1.04E+0	3.30E-5	2.00E+0	2.36E-5	-9.06E-1	5.50E-2
GWP-luluc	kg CO2 eq	2.55E-3	6.57E-5	3.68E-4	2.99E-3	1.93E-5	-1.45E-4	4.57E-7	-1.51E-4	2.71E-3
ODP	kg CFC11 eq	1.62E-7	4.12E-8	1.08E-7	3.10E-7	1.25E-8	3.24E-8	6.45E-10	-1.35E-7	2.21E-7
AP	mol H+ eq	5.79E-2	1.24E-3	2.34E-3	6.14E-2	3.10E-4	1.11E-3	1.59E-5	-2.21E-2	4.08E-2
EP-fw	kg P eq	1.03E-4	1.44E-6	6.77E-6	1.11E-4	4.48E-7	3.18E-6	2.10E-8	-7.53E-6	1.08E-4
EP-m	kg N eq	7.62E-3	4.14E-4	4.92E-4	8.53E-3	1.11E-4	3.76E-4	2.82E-5	-3.07E-3	5.97E-3
EP-T	mol N eq	8.46E-2	4.57E-3	4.78E-3	9.39E-2	1.22E-3	4.04E-3	6.35E-5	-3.37E-2	6.56E-2
POCP	kg NMVOC eq	4.22E-2	1.29E-3	1.55E-3	4.50E-2	3.49E-4	1.01E-3	2.32E-5	-1.79E-2	2.85E-2
ADP-mm	kg Sb eq	8.59E-5	4.49E-6	1.00E-5	1.00E-4	1.41E-6	4.76E-6	1.56E-8	-2.37E-6	1.04E-4
ADP-f	MJ	2.25E+2	2.74E+0	1.33E+1	2.41E+2	8.35E-1	3.29E+0	4.74E-2	-1.09E+2	1.36E+2
WDP	m3 depriv.	2.51E+0	8.22E-3	1.33E-1	2.65E+0	2.56E-3	7.74E-2	2.19E-4	-5.52E-1	2.18E+0
PM	disease inc.	4.74E-7	1.57E-8	1.71E-8	5.07E-7	4.91E-9	1.19E-8	3.24E-10	-1.86E-7	3.38E-7
IR	kBq U-235 eq	9.62E-2	1.20E-2	1.14E-2	1.20E-1	3.65E-3	1.08E-2	2.28E-4	-1.05E-2	1.24E-1
ETP-fw	CTUe	5.01E+1	2.20E+0	1.21E+1	6.44E+1	6.78E-1	5.19E+0	9.41E-2	-5.45E+0	6.50E+1
HTP-c	CTUh	3.12E-9	8.03E-11	5.02E-10	3.70E-9	2.41E-11	5.20E-10	1.25E-12	-3.73E-10	3.87E-9
HTP-nc	CTUh	5.08E-8	2.60E-9	1.06E-8	6.40E-8	8.08E-10	7.98E-9	3.89E-11	-7.25E-9	6.55E-8
SQP	Pt	1.06E+2	2.27E+0	1.70E+0	1.10E+2	7.15E-1	-6.97E+1	1.21E-1	-4.54E+0	3.66E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.70E+1	3.84E-2	2.38E+1	4.08E+1	1.20E-2	-1.05E+1	2.16E-3	-1.45E+0	2.89E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.70E+1	3.84E-2	2.38E+1	4.08E+1	1.20E-2	-1.05E+1	2.16E-3	-1.45E+0	2.89E+1
PENRE	MJ	2.41E+2	2.90E+0	1.46E+1	2.59E+2	8.87E-1	3.50E+0	5.03E-2	-1.18E+2	1.45E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.41E+2	2.90E+0	1.46E+1	2.59E+2	8.87E-1	3.50E+0	5.03E-2	-1.18E+2	1.45E+2
PET	MJ	2.58E+2	2.94E+0	3.84E+1	2.99E+2	8.99E-1	-6.97E+0	5.25E-2	-1.19E+2	1.74E+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	5.98E-2	3.03E-4	3.98E-3	6.41E-2	9.45E-5	2.36E-3	5.90E-5	-1.16E-2	5.50E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.75E-5	6.83E-6	1.40E-5	6.83E-5	2.14E-6	3.96E-6	5.66E-8	-2.68E-5	4.76E-5
NHWD	kg	6.50E-1	1.64E-1	6.52E-2	8.79E-1	5.18E-2	2.82E-1	2.07E-1	-5.40E-2	1.37E+0
RWD	kg	8.99E-5	1.86E-5	1.06E-5	1.19E-4	5.68E-6	1.42E-5	3.13E-7	-1.22E-5	1.27E-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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