

Environmental Profile

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

Ecochain v3.5.71



Product: 4013648 - Hep20 Pb Pipe Rd 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	7.71E+0	1.87E-1	1.44E-1	8.04E+0	5.45E-2	6.29E+0	2.38E-2	-6.82E+0	7.59E+0
GWP-f	kg CO2 eq	9.93E+0	1.86E-1	1.44E-1	1.03E+1	5.44E-2	2.30E+0	2.38E-2	-5.03E+0	7.61E+0
GWP-b	kg CO2 eq	-2.22E+0	1.07E-4	-3.05E-4	-2.22E+0	3.30E-5	4.00E+0	2.36E-5	-1.79E+0	-1.69E-2
GWP-luluc	kg CO2 eq	3.12E-3	6.81E-5	1.83E-4	3.37E-3	1.93E-5	-6.16E-4	4.57E-7	-2.02E-4	2.58E-3
ODP	kg CFC11 eq	1.82E-7	4.27E-8	6.70E-9	2.31E-7	1.25E-8	1.70E-8	6.45E-10	-1.34E-7	1.27E-7
AP	mol H+ eq	5.88E-2	1.28E-3	9.18E-4	6.10E-2	3.10E-4	2.71E-4	1.59E-5	-2.22E-2	3.94E-2
EP-fw	kg P eq	1.10E-4	1.50E-6	2.20E-6	1.14E-4	4.48E-7	-3.24E-6	2.10E-8	-7.93E-6	1.03E-4
EP-m	kg N eq	7.89E-3	4.28E-4	1.31E-4	8.45E-3	1.11E-4	1.52E-4	2.82E-5	-3.09E-3	5.65E-3
EP-T	mol N eq	8.77E-2	4.72E-3	1.54E-3	9.40E-2	1.22E-3	1.52E-3	6.35E-5	-3.41E-2	6.27E-2
POCP	kg NMVOC eq	4.34E-2	1.33E-3	4.72E-4	4.52E-2	3.49E-4	7.78E-6	2.32E-5	-1.80E-2	2.76E-2
ADP-mm	kg Sb eq	8.85E-5	4.67E-6	5.33E-6	9.85E-5	1.41E-6	2.40E-6	1.56E-8	-2.40E-6	9.99E-5
ADP-f	MJ	2.27E+2	2.84E+0	1.60E+0	2.31E+2	8.35E-1	9.25E-1	4.74E-2	-1.09E+2	1.25E+2
WDP	m3 depriv.	2.54E+0	8.54E-3	3.62E-2	2.59E+0	2.56E-3	3.85E-2	2.19E-4	-5.51E-1	2.08E+0
PM	disease inc.	4.96E-7	1.63E-8	6.72E-9	5.19E-7	4.91E-9	-6.23E-9	3.24E-10	-1.87E-7	3.32E-7
IR	kBq U-235 eq	1.04E-1	1.24E-2	2.43E-3	1.19E-1	3.65E-3	4.40E-3	2.28E-4	-1.07E-2	1.16E-1
ETP-fw	CTUe	5.40E+1	2.29E+0	5.60E+0	6.19E+1	6.78E-1	1.83E+0	9.41E-2	-6.29E+0	5.82E+1
HTP-c	CTUh	3.59E-9	8.33E-11	2.19E-10	3.90E-9	2.41E-11	1.46E-10	1.25E-12	-3.83E-10	3.68E-9
HTP-nc	CTUh	5.42E-8	2.70E-9	5.01E-9	6.19E-8	8.08E-10	5.10E-9	3.89E-11	-7.60E-9	6.03E-8
SQP	Pt	1.99E+2	2.36E+0	6.89E-1	2.02E+2	7.15E-1	-1.44E+2	1.21E-1	-8.22E+0	5.04E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.04E+1	3.99E-2	1.35E+1	4.39E+1	1.20E-2	-2.12E+1	2.16E-3	-2.36E+0	2.04E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.04E+1	3.99E-2	1.35E+1	4.39E+1	1.20E-2	-2.12E+1	2.16E-3	-2.36E+0	2.04E+1
PENRE	MJ	2.43E+2	3.02E+0	1.70E+0	2.48E+2	8.87E-1	9.80E-1	5.03E-2	-1.17E+2	1.33E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.43E+2	3.02E+0	1.70E+0	2.48E+2	8.87E-1	9.80E-1	5.03E-2	-1.17E+2	1.33E+2
PET	MJ	2.74E+2	3.06E+0	1.52E+1	2.92E+2	8.99E-1	-2.02E+1	5.25E-2	-1.20E+2	1.53E+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	6.09E-2	3.15E-4	1.26E-3	6.24E-2	9.45E-5	1.17E-3	5.90E-5	-1.16E-2	5.22E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.46E-5	7.10E-6	1.41E-8	6.17E-5	2.14E-6	-1.70E-6	5.66E-8	-2.67E-5	3.55E-5
NHWD	kg	7.00E-1	1.70E-1	3.48E-4	8.70E-1	5.18E-2	2.44E-1	2.07E-1	-5.53E-2	1.32E+0
RWD	kg	9.94E-5	1.93E-5	1.06E-8	1.19E-4	5.68E-6	6.67E-6	3.13E-7	-1.24E-5	1.19E-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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