

Environmental Profile

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

Ecochain v3.5.71



Product: 3029636 - Hep20 Barrier Pipe W 28 L=3
 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	☑	☑	☑	☑									

Product stage

A1 Raw material supply A2 Transport A3 Manufacturing

Construction process stage

A4 Transport gate to site
 A5 Assembly / Construction installation process

Use stage

B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment
 B6 Operational energy use B7 Operational water use

End-of-Life stage

C1 De-construction demolition C2 Transport C3 Waste processing
 C4 Disposal

Benefits and loads beyond the system boundaries

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	2.52E+0	5.32E-2	3.07E-1	2.88E+0	1.61E-2	4.49E-1	7.03E-3	-1.33E+0	2.02E+0
GWP-f	kg CO2 eq	2.51E+0	5.31E-2	2.85E-1	2.85E+0	1.61E-2	4.49E-1	7.03E-3	-1.33E+0	1.99E+0
GWP-b	kg CO2 eq	1.16E-2	3.01E-5	2.24E-2	3.40E-2	9.80E-6	-6.37E-4	7.03E-6	-5.20E-3	2.82E-2
GWP-luluc	kg CO2 eq	1.63E-4	1.95E-5	1.03E-4	2.85E-4	5.71E-6	9.48E-5	1.36E-7	-1.12E-5	3.75E-4
ODP	kg CFC11 eq	2.27E-8	1.22E-8	3.29E-8	6.77E-8	3.72E-9	1.34E-8	1.91E-10	-1.84E-8	6.66E-8
AP	mol H+ eq	1.64E-2	3.73E-4	6.68E-4	1.75E-2	9.19E-5	5.28E-4	4.74E-6	-6.67E-3	1.14E-2
EP-fw	kg P eq	1.19E-5	4.26E-7	1.96E-6	1.43E-5	1.33E-7	2.77E-6	6.26E-9	-1.06E-6	1.62E-5
EP-m	kg N eq	1.92E-3	1.24E-4	1.44E-4	2.18E-3	3.29E-5	1.56E-4	8.78E-6	-8.85E-4	1.50E-3
EP-T	mol N eq	2.11E-2	1.37E-3	1.39E-3	2.38E-2	3.62E-4	1.71E-3	1.89E-5	-9.68E-3	1.63E-2
POCP	kg NMVOC eq	1.11E-2	3.85E-4	4.50E-4	1.20E-2	1.04E-4	5.30E-4	6.87E-6	-5.31E-3	7.28E-3
ADP-mm	kg Sb eq	1.88E-5	1.33E-6	2.78E-6	2.29E-5	4.17E-7	2.03E-6	4.63E-9	-2.33E-7	2.51E-5
ADP-f	MJ	5.53E+1	8.09E-1	4.03E+0	6.02E+1	2.48E-1	1.61E+0	1.41E-2	-2.91E+1	3.30E+1
WDP	m3 depriv.	4.72E-1	2.43E-3	3.89E-2	5.13E-1	7.60E-4	3.36E-2	6.51E-5	-1.27E-1	4.21E-1
PM	disease inc.	1.26E-7	4.64E-9	4.90E-9	1.36E-7	1.46E-9	8.33E-9	9.60E-11	-5.66E-8	8.93E-8
IR	kBq U-235 eq	1.03E-2	3.53E-3	3.39E-3	1.72E-2	1.08E-3	4.89E-3	6.79E-5	-1.20E-3	2.21E-2
ETP-fw	CTUe	7.19E+0	6.51E-1	3.42E+0	1.13E+1	2.01E-1	2.45E+0	2.91E-2	-8.39E-1	1.31E+1
HTP-c	CTUh	7.39E-10	2.38E-11	1.42E-10	9.05E-10	7.16E-12	2.24E-10	3.72E-13	-8.98E-11	1.05E-9
HTP-nc	CTUh	1.05E-8	7.68E-10	2.98E-9	1.42E-8	2.40E-10	2.87E-9	1.18E-11	-2.17E-9	1.52E-8
SQP	Pt	2.20E+0	6.69E-1	4.84E-1	3.35E+0	2.12E-1	1.27E+0	3.58E-2	-1.13E-1	4.76E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.35E-1	1.13E-2	6.56E+0	7.11E+0	3.55E-3	8.16E-2	6.47E-4	-1.32E-1	7.06E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.35E-1	1.13E-2	6.56E+0	7.11E+0	3.55E-3	8.16E-2	6.47E-4	-1.32E-1	7.06E+0
PENRE	MJ	5.94E+1	8.59E-1	4.42E+0	6.47E+1	2.63E-1	1.72E+0	1.49E-2	-3.13E+1	3.54E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.94E+1	8.59E-1	4.42E+0	6.47E+1	2.63E-1	1.72E+0	1.49E-2	-3.13E+1	3.54E+1
PET	MJ	6.00E+1	8.70E-1	1.10E+1	7.18E+1	2.67E-1	1.80E+0	1.56E-2	-3.15E+1	4.24E+1
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	1.13E-2	8.94E-5	1.16E-3	1.25E-2	2.80E-5	9.80E-4	1.75E-5	-2.87E-3	1.07E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.67E-6	2.01E-6	4.32E-6	1.20E-5	6.33E-7	2.67E-6	1.68E-8	-3.54E-6	1.18E-5
NHWD	kg	1.75E-1	4.82E-2	2.01E-2	2.43E-1	1.54E-2	7.80E-2	6.14E-2	-1.35E-2	3.84E-1
RWD	kg	1.06E-5	5.51E-6	3.27E-6	1.94E-5	1.68E-6	6.13E-6	9.28E-8	-1.47E-6	2.58E-5
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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