

Environmental Profile

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

Ecochain v3.5.71



Product: 3070736 - Hep20 Barrier Pipe 15 L = 80m
Unit: 1 piece
Manufacturer: Wavin - UK - Doncaster - Verified

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

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



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	2.46E+1	5.07E-1	3.78E-1	2.55E+1	1.57E-1	4.74E+0	6.84E-2	-1.31E+1	1.73E+1
GWP-f	kg CO2 eq	2.45E+1	5.07E-1	3.78E-1	2.54E+1	1.57E-1	4.74E+0	6.84E-2	-1.31E+1	1.73E+1
GWP-b	kg CO2 eq	9.97E-2	2.88E-4	-7.73E-4	9.93E-2	9.53E-5	-6.21E-3	6.83E-5	-5.03E-2	4.29E-2
GWP-luluc	kg CO2 eq	2.02E-3	1.86E-4	4.80E-4	2.68E-3	5.56E-5	9.25E-4	1.32E-6	-1.32E-4	3.53E-3
ODP	kg CFC11 eq	2.41E-7	1.16E-7	1.76E-8	3.74E-7	3.62E-8	1.32E-7	1.86E-9	-2.05E-7	3.39E-7
AP	mol H+ eq	1.59E-1	3.55E-3	2.41E-3	1.65E-1	8.94E-4	5.20E-3	4.61E-5	-6.46E-2	1.06E-1
EP-fw	kg P eq	1.34E-4	4.06E-6	5.78E-6	1.44E-4	1.29E-6	2.70E-5	6.09E-8	-1.21E-5	1.60E-4
EP-m	kg N eq	1.87E-2	1.18E-3	3.45E-4	2.03E-2	3.20E-4	1.54E-3	8.47E-5	-8.61E-3	1.36E-2
EP-T	mol N eq	2.06E-1	1.31E-2	4.06E-3	2.23E-1	3.53E-3	1.69E-2	1.84E-4	-9.42E-2	1.50E-1
POCP	kg NMVOC eq	1.08E-1	3.67E-3	1.24E-3	1.13E-1	1.01E-3	5.23E-3	6.69E-5	-5.16E-2	6.78E-2
ADP-mm	kg Sb eq	1.90E-4	1.26E-5	1.40E-5	2.16E-4	4.06E-6	1.98E-5	4.51E-8	-3.02E-6	2.37E-4
ADP-f	MJ	5.47E+2	7.72E+0	4.22E+0	5.59E+2	2.41E+0	1.58E+1	1.37E-1	-2.87E+2	2.91E+2
WDP	m3 depriv.	5.03E+0	2.31E-2	9.51E-2	5.15E+0	7.40E-3	3.28E-1	6.33E-4	-1.29E+0	4.20E+0
PM	disease inc.	1.23E-6	4.43E-8	1.77E-8	1.29E-6	1.42E-8	8.17E-8	9.34E-10	-5.47E-7	8.37E-7
IR	kBq U-235 eq	1.18E-1	3.37E-2	6.40E-3	1.58E-1	1.05E-2	4.79E-2	6.60E-4	-1.41E-2	2.03E-1
ETP-fw	CTUe	7.72E+1	6.21E+0	1.47E+1	9.82E+1	1.96E+0	2.40E+1	2.81E-1	-9.04E+0	1.15E+2
HTP-c	CTUh	7.37E-9	2.27E-10	5.76E-10	8.17E-9	6.96E-11	2.23E-9	3.61E-12	-8.97E-10	9.58E-9
HTP-nc	CTUh	1.07E-7	7.32E-9	1.32E-8	1.28E-7	2.33E-9	2.83E-8	1.15E-10	-2.00E-8	1.39E-7
SQP	Pt	2.34E+1	6.38E+0	1.81E+0	3.16E+1	2.06E+0	1.24E+1	3.48E-1	-1.29E+0	4.51E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.76E+0	1.08E-1	3.55E+1	4.14E+1	3.46E-2	7.97E-1	6.28E-3	-1.32E+0	4.09E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.76E+0	1.08E-1	3.55E+1	4.14E+1	3.46E-2	7.97E-1	6.28E-3	-1.32E+0	4.09E+1
PENRE	MJ	5.88E+2	8.20E+0	4.48E+0	6.01E+2	2.56E+0	1.68E+1	1.45E-1	-3.09E+2	3.11E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.88E+2	8.20E+0	4.48E+0	6.01E+2	2.56E+0	1.68E+1	1.45E-1	-3.09E+2	3.11E+2
PET	MJ	5.94E+2	8.30E+0	4.00E+1	6.42E+2	2.59E+0	1.76E+1	1.52E-1	-3.10E+2	3.52E+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	1.19E-1	8.53E-4	3.30E-3	1.23E-1	2.73E-4	9.62E-3	1.71E-4	-2.88E-2	1.05E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.94E-5	1.92E-5	4.25E-8	7.87E-5	6.16E-6	2.62E-5	1.63E-7	-4.02E-5	7.10E-5
NHWD	kg	1.72E+0	4.60E-1	9.38E-4	2.18E+0	1.49E-1	7.78E-1	5.97E-1	-1.34E-1	3.57E+0
RWD	kg	1.18E-4	5.26E-5	3.19E-8	1.70E-4	1.64E-5	6.01E-5	9.03E-7	-1.71E-5	2.31E-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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