

Environmental Profile

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

Ecochain v3.5.71



Product: 3029635 - Hep20 Barrier Pipe W 22 L=3
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	1.51E+0	3.17E-2	1.88E-1	1.73E+0	9.80E-3	2.74E-1	4.27E-3	-8.06E-1	1.22E+0
GWP-f	kg CO2 eq	1.51E+0	3.16E-2	1.75E-1	1.71E+0	9.79E-3	2.74E-1	4.27E-3	-8.03E-1	1.20E+0
GWP-b	kg CO2 eq	6.91E-3	1.79E-5	1.37E-2	2.07E-2	5.95E-6	-3.87E-4	4.26E-6	-3.14E-3	1.72E-2
GWP-luluc	kg CO2 eq	1.04E-4	1.16E-5	6.24E-5	1.78E-4	3.47E-6	5.75E-5	8.26E-8	-7.70E-6	2.31E-4
ODP	kg CFC11 eq	1.41E-8	7.25E-9	2.02E-8	4.16E-8	2.26E-9	8.14E-9	1.16E-10	-1.13E-8	4.08E-8
AP	mol H+ eq	9.82E-3	2.22E-4	4.06E-4	1.04E-2	5.58E-5	3.20E-4	2.87E-6	-4.02E-3	6.81E-3
EP-fw	kg P eq	7.44E-6	2.54E-7	1.20E-6	8.89E-6	8.06E-8	1.68E-6	3.80E-9	-6.93E-7	9.96E-6
EP-m	kg N eq	1.15E-3	7.39E-5	8.82E-5	1.31E-3	2.00E-5	9.48E-5	5.29E-6	-5.34E-4	8.97E-4
EP-T	mol N eq	1.27E-2	8.15E-4	8.46E-4	1.43E-2	2.20E-4	1.04E-3	1.14E-5	-5.84E-3	9.75E-3
POCP	kg NMVOC eq	6.66E-3	2.29E-4	2.75E-4	7.16E-3	6.29E-5	3.21E-4	4.17E-6	-3.20E-3	4.35E-3
ADP-mm	kg Sb eq	1.17E-5	7.89E-7	1.68E-6	1.42E-5	2.53E-7	1.23E-6	2.81E-9	-1.72E-7	1.55E-5
ADP-f	MJ	3.35E+1	4.82E-1	2.47E+0	3.64E+1	1.50E-1	9.78E-1	8.54E-3	-1.76E+1	1.99E+1
WDP	m3 depriv.	2.93E-1	1.44E-3	2.38E-2	3.18E-1	4.61E-4	2.04E-2	3.95E-5	-7.89E-2	2.60E-1
PM	disease inc.	7.57E-8	2.76E-9	2.98E-9	8.14E-8	8.84E-10	5.05E-9	5.83E-11	-3.41E-8	5.33E-8
IR	kBq U-235 eq	6.56E-3	2.10E-3	2.07E-3	1.07E-2	6.57E-4	2.97E-3	4.12E-5	-7.93E-4	1.36E-2
ETP-fw	CTUe	4.43E+0	3.88E-1	2.07E+0	6.89E+0	1.22E-1	1.49E+0	1.76E-2	-5.23E-1	7.99E+0
HTP-c	CTUh	4.45E-10	1.42E-11	8.65E-11	5.45E-10	4.34E-12	1.36E-10	2.25E-13	-5.48E-11	6.31E-10
HTP-nc	CTUh	6.39E-9	4.57E-10	1.81E-9	8.65E-9	1.46E-10	1.74E-9	7.15E-12	-1.33E-9	9.22E-9
SQP	Pt	1.35E+0	3.98E-1	2.94E-1	2.05E+0	1.29E-1	7.69E-1	2.17E-2	-7.23E-2	2.89E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.29E-1	6.75E-3	3.97E+0	4.30E+0	2.16E-3	4.95E-2	3.92E-4	-8.13E-2	4.27E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.29E-1	6.75E-3	3.97E+0	4.30E+0	2.16E-3	4.95E-2	3.92E-4	-8.13E-2	4.27E+0
PENRE	MJ	3.59E+1	5.12E-1	2.71E+0	3.92E+1	1.60E-1	1.04E+0	9.06E-3	-1.90E+1	2.14E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.59E+1	5.12E-1	2.71E+0	3.92E+1	1.60E-1	1.04E+0	9.06E-3	-1.90E+1	2.14E+1
PET	MJ	3.63E+1	5.18E-1	6.68E+0	4.35E+1	1.62E-1	1.09E+0	9.45E-3	-1.91E+1	2.56E+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	6.96E-3	5.32E-5	7.05E-4	7.72E-3	1.70E-5	5.95E-4	1.06E-5	-1.77E-3	6.57E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.53E-6	1.20E-6	2.66E-6	7.39E-6	3.84E-7	1.62E-6	1.02E-8	-2.17E-6	7.23E-6
NHWD	kg	1.05E-1	2.87E-2	1.24E-2	1.46E-1	9.32E-3	4.74E-2	3.72E-2	-8.22E-3	2.32E-1
RWD	kg	6.69E-6	3.28E-6	2.01E-6	1.20E-5	1.02E-6	3.72E-6	5.63E-8	-9.51E-7	1.58E-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



Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
<https://www.ecochain.com>
+31 20 3035 777